SIERRA LEONE CIVIL AVIATION AUTHORITY

ADVISORY CIRCULAR

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Commercial Pilot - Aeroplane Skill Test Standards

Director General
Sierra Leone Civil Aviation Authority

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FORWORD

The Sierra Leone Civil Aviation Authority (SLCAA) has developed skill test standards for airmen licences and ratings and these are published as SLCAA Advisory Circulars (ACs). This AC establishes the standards for the commercial pilot licence skill tests for the aeroplane category. Sierra Leone inspectors and designated pilot flight test examiners shall conduct skill tests in compliance with these standards. Flight instructors and applicants should find these standards helpful in skill test preparation. Other MDs have been developed for other airmen licences and can be obtained from the SLCAA website: http://www.slcaa.gov.sl

Information considered directive in nature is described in this skill test AC in terms such as "shall" and "must," indicating the actions are mandatory. Guidance information is described in terms such as "should" and "may," indicating the actions are desirable or permissive, but not mandatory.
The Sierra Leone Civil Aviation Regulations (SLCARs) can be obtained from the SLCAA at the address given below. SLCAR Part 1A covers the requirements for Personnel Licensing.

This skill test standard may be downloaded from the SLCAA website at http://www.slcaa.gov.sl Subsequent changes to the skill test standard will also be available on the SLCAA website.

Comments regarding this publication should be sent to:

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SECTION ONE: INSTRUCTIONS

1.1 GENERAL

The SLCAA has developed this skill test AC as the standard that shall be used by SLCAA inspectors and designated flight test examiners when conducting Commercial Pilot Licence – Aeroplane Skill Tests. Flight instructors are expected to use this document when preparing applicants for skill tests. Applicants should be familiar with this document and refer to these standards during their training.

1.2 PURPOSE

The purpose of this AC is to prescribe the standards that shall be used by SLCAA inspectors and designated flight test examiners when conducting Commercial Pilot – Aeroplane Skill Tests. Flight instructors are expected to use this document when preparing applicants for skill tests. Applicants should be familiar with this document and refer to these standards during their training.

1.3 SKILL TEST STANDARD CONCEPT

The SLCARs specify the areas in which knowledge and skill must be demonstrated by the applicant before the issuance of a licence or rating. The SLCARs provide the flexibility to permit the SLCAA to publish skill test standards (STSs) containing the AREAS OF OPERATION and specific TASKS in which pilot competency shall be demonstrated. The SLCAA will revise this STS whenever it is determined that changes are needed in the interest of safety. Adherence to the provisions of the regulations and the STS is mandatory for evaluation of pilot applicants.

1.4 SKILL TEST DESCRIPTION

(1) This AC contains the STS for the commercial pilot licence for both single-engine and multi-engine aeroplanes. Section 2 contains the STS for single-engine aeroplanes on land and sea. Section 3 contains the STS for multi-engine aeroplanes on land and sea. The Commercial Pilot Licence – Aeroplane STS includes the AREAS OF OPERATION and TASKS for the issuance of an initial commercial pilot licence and for the addition of category ratings and/or class ratings to that licence.

(2) AREAS OF OPERATION are phases of the skill test arranged in a logical sequence within each standard. They begin with pre-flight preparation and end with post-flight procedures. The examiner may conduct the skill test in any sequence that results in a complete and efficient test; however, the ground portion of the skill test shall be accomplished before the flight portion.

(3) TASKS are titles of knowledge areas, flight procedures, or manoeuvres appropriate to an AREA OF OPERATION. The abbreviations within parentheses immediately following a TASK refer to the category and/or class aircraft appropriate to that TASK. The meaning of each abbreviation is as follows:
ASEL Aeroplane – Single-Engine Land
AMEL Aeroplane – Multi-Engine Land
ASES Aeroplane – Single-Engine Sea
AMES Aeroplane – Multi-Engine Sea

Note: When administering a test based on Section 2 and 3 of this AC, the TASKS appropriate to the class aeroplane (ASEL, ASES, AMEL, or AMES) used for the test shall be included in the plan of action. The absence of a class indicates the TASK is for all classes.

(4) NOTE is used to emphasise special considerations required in the AREA OF OPERATION or TASK.

(5) REFERENCE identifies the publication(s) that describe(s) the TASK. Descriptions of TASKS are not included in the standards because this information can be found in the current issue of the listed references. Publications other than those listed may be used for references if their content conveys substantially the same meaning as the referenced publications. The STSs are based on the following references:

SLCARs Part 1A	Personnel Licensing
SLCARs Parts 6	Operations
SLCARs Part 8	Airworthiness
SLCARs Part 22	General Policies, Procedures, and Definitions
SLCARs Part 25	Instruments and Equipment
SLCARs Part 26	Air Operator Certification
NOTAMS	Notices to Airmen
RESERVED	
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(6) The OBJECTIVE lists the important elements that must be satisfactorily performed to demonstrate competency in a TASK. The OBJECTIVE includes:

(a) Specifically what the applicant should be able to do

(b) The conditions under which the TASK is to be performed

(c) The acceptable standards of performance

(7) The following ABBREVIATIONS have the meanings shown:

ADF	Automatic Direction Finder
ADM	Aeronautical Decision Making
AIRMETS	Airman's Meteorological Information
APV	Approach with Vertical Guidance
ATC	Air Traffic Control
ATIS	Automatic Terminal Information Service
ATS	Air Traffic Service
SLCARs	Nigeria Civil Aviation Regulations
CDI	Course Deviation Indicator
CFIT	Controlled Flight into Terrain
CRM	Crew Resource Management
DA	Decision Altitude
DH	Decision Height
DME	Distance Measuring Equipment
DP	Departure Procedure
SLCAA	Sierra Leone Civil Aviation Authority
FDC	Flight Data Center

FMS	Flight Management System
FSTD	Flight Simulation Training Device
GLS	GNSS Landing System
GNSS	Global Navigation Satellite System
GPS	Global Positioning System
GPWS	Ground Proximity Warning System
IAP	Instrument Approach Procedure
IFR	Instrument Flight Rules
ILS	Instrument Landing System
IMC	Instrument Meteorological Conditions
IPC	Instrument Proficiency Check
LAHSO	Land and Hold Short Operations
LCD	Liquid Crystal Display
LDA	Localizer-type Directional Aid
LED	Light Emitting Diode
LOC	ILS Localizer
LORAN	Long Range Navigation
MAP	Missed Approach Point
ACA	Minimum Descent Attitude
METAR	Aviation Routine Weather Report
MLS	Microwave Landing System
NAVAID	Navigational Aid
NDB	Non-Directional Beacon
NOTAM	Notice to Airmen
NPA	Non-precision Approach
PA	Precision Approach
RAIM	Receiver Autonomous Integrity Monitoring
RMI	Radio Magnetic Indicator
RNAV	Area navigation
SAS	Stability Augmentation System
SDF	Simplified Directional Facility
SIGMETS	Significant Meteorological Advisory
SRM	Single Pilot Resource Management
STAR	Standard Terminal Arrival
STS	Skill Test Standards
TCAS	Traffic Alert and Collision Avoidance System
VDP	Visual Descent Point
VHF	Very High Frequency
VNAV	Vertical Navigation
VOR	Very High Frequency Ominidirectional Range
VR	Rotation Speed
VREF	Reference Landing Approach Speed
VSSE	Safe, Intentional, One-engine Inoperative Speed
VX	Best Angle of Climb Speed
VY	Best Rate-of-Climb Speed

(8) This STS uses the term "examiner" to refer to either a qualified SLCAA inspector or designated pilot examiner when giving a skill test.

1.5 USE OF THE SKILL TEST STANDARDS

(1) The skill test standards are designed to evaluate competency in both knowledge and skill.

(2) The SLCAA requires that all skill tests be conducted in accordance with the appropriate STS and the policies set forth in Section 1. Applicants shall be evaluated in ALL TASKS included in the AREAS OF OPERATION of the appropriate STS (unless noted otherwise).

(3) An applicant who holds at least a commercial pilot licence and who is seeking an additional aeroplane category rating and/or class rating at the commercial pilot level shall be evaluated in the AREAS OF OPERATION and TASKS listed in the additional rating TASK tables contained in paragraph 1.22. At the discretion of the examiner, an evaluation of the applicant's competence in the remaining AREAS OF OPERATION and TASKS may be conducted.

(4) If the applicant holds two or more category or class ratings at least at the commercial level and the ratings table indicates differing required TASKS, the "least restrictive" entry applies. For example, if "ALL" and "NONE" are indicated for one AREA OF OPERATION, the "NONE" entry applies. If "B" and "B, C" are indicated, the "B" entry applies.

(5) In preparation for each skill test, the examiner shall develop a written "plan of action" for each skill test. The plan of action is a tool for the sole use of the examiner to use in evaluating the applicant. The plan of action need not be grammatically correct or in any formal format. The plan of action must contain all the required AREAS OF OPERATION and TASKS and any optional TASKS selected by the examiner. The plan of action shall incorporate one or more scenarios that will be used during the skill test. The examiner should try to include as many of the TASKS into the scenario portion of the test as possible, but maintain the flexibility to change due to unexpected situations as they arise and still result in an efficient and valid test. **Any TASK selected for evaluation during a skill test shall be evaluated in its entirety.**

(6) The examiner is not required to follow the precise order in which the AREAS OF OPERATION and TASKS appear in this document. The examiner may change the sequence or combine TASKS with similar OJBECTIVES to have an orderly and efficient flow of the skill test. For example, holding procedures may be combined with an approach or missed approach procedures if a holding entry is part of the procedure.

(7) When using the STS, the examiner must evaluate the applicants knowledge and skill in sufficient depth to determine that the standards of performance listed for all TASKS are met. The examiner is expected to use good judgement in the performance of simulated emergency procedures.

The use of the safest means for simulation is expected. Consideration must be given to local conditions, both meteorological and topographical at the time of the test, as well as the applicant's workload and the condition of the aircraft used. If the procedure being evaluated would jeopardise safety, it is expected that the applicant will simulate that portion of the manoeuvre.

1.5.1 Removal of the "Aeroplane Multi-Engine VFR Only" Limitation

The removal of the "Aeroplane Multiengine VFR Only" limitation, at the commercial pilot licence level, requires an applicant to satisfactorily perform the following AREAS OF OPERATION and TASKS from the commercial AMEL and AMES STS in a multi-engine aeroplane that has a manufacturer published VMC speed.

AREA OF OPERATION X: MULTI-ENGINE OPERATIONS

TASK C: ENGINE FAILURE DURING FLIGHT (by reference to instruments)

TASK D: INSTRUMENT APPROACH – ONE ENGINE INOPERATIVE (by reference to instruments)

1.5.2 Removal of the "Limited to Centre Thrust" Limitation

The removal of the "Limited to Centre Thrust" limitation at the commercial pilot licence level requires an applicant to satisfactorily perform the following AREAS OF OPERATION and TASKS from the commercial AMEL and AMES STS in Section Three in a multi-engine aeroplane that has a manufacturer published VMC speed.

AREA OF OPERATION I: PRE-FLIGHT PREPARTATION

TASK H: PRINCIPLES OF FLIGHT-ENGINE INOPERATIVE

AREA OF OPERATION VIII: EMERGENCY OPERATIONS

TASK B: ENGINE FAILURE DURING TAKE-OFF BEFORE VMC (SIMULATED)

TASK C: ENGINE FAILURE AFTER LIFT-OFF (SIMULATED)

TASK D: APPROACH AND LANDING WITH AN INOPERATIVE ENGINE (SIMULATED)

AREA OF OPERATION X: MULTI-ENGINE OPERATIONS

TASK A: MANOEUVREING WITH ONE ENGINE INOPERATIVE

TASK B: VMC DEMONSTRATION

1.6 SPECIAL EMPHASIS AREAS

(1) Flight test examiners shall place special emphasis upon areas of aircraft operations considered critical to flight safety. Among these are:
   (a) Positive aircraft control;
   (b) Positive exchange of the flight controls procedure (who is flying the aircraft);
   (c) Stall/spin awareness;
   (d) Collision avoidance;
   (e) Wake turbulence avoidance;
   (f) Runway incursion avoidance;
   (g) LAHSO (Land and Hold Short Operations);
   (h) CFIT;
   (i) ADM and risk management;
   (j) Checklist usage;
   (k) Temporary flight restrictions (TFRs);
   (l) Special use airspace (SUA);
   (m) Aviation security,
   (n) Single-Pilot Resource Management (SRM), and
   (o) Other areas deemed appropriate to any phase of the skill test.

(2) A given special emphasis area may not be specifically addressed under a given TASK. All areas are essential to flight safety and will be evaluated during the skill test.

1.7 SKILL TEST PREREQUISITES

An applicant for a commercial pilot rating for Aeroplane Skill Test is required to:

(1) Meet the applicable requirements in SLCAR Part 1A for a commercial pilot rating;

(2) Hold the appropriate medical certificate;

(3) Pass the required knowledge test; and

(4) Obtain a written endorsement from an authorised instructor certifying that the applicant has met the flight training requirements for the skill test. The endorsement shall also state that the instructor finds the applicant competent to pass the skill test and that the applicant has satisfactory knowledge of the subject area(s) in which a deficiency was indicated by the Airman Knowledge Test Report.

1.8 AIRCRAFT AND EQUIPMENT REQUIRED FOR THE SKILL TEST

An applicant is required to provide an airworthy, certificated aircraft for use during the skill test. This section further requires that the aircraft:

(1) Be of Sierra Leone, foreign, or military registry of the same category, class and type, if applicable, for the licence and/or rating for which the candidate is applying.

(2) Have functioning dual controls, except as provided in SLCAR Part 1A.

(3) Be capable of performing all AREAS OF OPERATION appropriate to the rating sought and have no operating limitations which prohibit its use in any of the AREAS OF OPERATION required for the skill test.

(4) Be a complex aeroplane furnished by the applicant unless the applicant currently holds a commercial pilot licence with a single-engine or multi-engine class rating as appropriate, for the performance of take-offs, landings, and appropriate emergency procedures. A complex landplane is one having retractable landing gear, flaps, and controllable propeller or turbine-powered. A complex seaplane is one having flaps and controllable propeller.

1.9 USE OF SLCAA-APPROVED FLIGHT SIMULATION TRAINING DEVICE

(1) An airman applicant for a Commercial Pilot – Aeroplane rating is authorised to use an SLCAA qualified and approved full flight simulator qualified as levels A-D and/or a flight training device qualified as levels 4- , to complete certain flight TASK requirements listed in this skill test standard in Appendices 1 and 2.

(2) Such FSTDs must be used in accordance with a curriculum approved for use at an approved training organisation certificated under SLCAR Part 1B and conducted by examiners authorised by the SLCAA to conduct such tests in a FSTD.

(3) When flight TASKS are accomplished in an aircraft, certain TASK elements may be accomplished through "simulated" actions in the interest of safety and practicality, but when accomplished in a flight simulator or flight training device, these same actions would not be "simulated." For example, when in an aircraft, a simulated engine fire may be addressed by retarding the throttle to idle, simulating the shutdown of the engine, simulating the discharge of the fire suppression agent, if applicable, simulating the disconnect of associated electrical, hydraulic, and pneumatics systems. However, when the same emergency condition is addressed in a flight simulator or flight training device, all TASK elements must be accomplished as would be expected under actual circumstances.

(4) Similarly, safety of flight precautions taken in the aircraft for the accomplishment of a specific manoeuvre or procedure (such as limiting altitude in an approach to stall or setting maximum airspeed for an engine failure expected to result in a

rejected take-off) need not be taken when a flight simulator or flight training device is used.

(4) It is important to understand that whether accomplished in an aircraft, flight simulator, or flight training device, all TASKS and elements for each manoeuvre or procedure shall have the same performance standards applied equally for determination of overall satisfactory performance.

1.10 FLIGHT INSTRUCTOR RESPONSIBILITY

(1) An appropriately rated flight instructor is responsible for training the pilot applicant to acceptable standards in all subject matter areas, procedures, and manoeuvres included in the TASKS within the appropriate skill test standard.

(2) Because of the impact of their teaching activities in developing safe, proficient pilots, flight instructors should exhibit a high level of knowledge, skill, and the ability to impart that knowledge and skill to participants. Additionally, the flight instructor must certify that the applicant is able to perform safely as a pilot and is competent to pass the required skill test.

(3) Throughout the applicants training, the flight instructor is responsible for emphasising the performance of effective visual scanning, collision avoidance procedures, and the manufacturer's recommended procedures for the aeroplane flown and other areas deemed appropriate to the skill test.

(4) Stalls and spin awareness. During flight training, there must always be a clear understanding concerning stalls and spin awareness. All stalls at the Private Level will be in accordance with CAA policy. All stalls will be recovered no lower than 1,500 feet AGL for single-engine aeroplanes and 3,000 feet AGL for multi-engine aeroplanes, unless the manufacturer recommends a higher altitude to initiate the recovery.

1.11 EXAMINER RESPONSIBILITY

(1) The examiner conducting the skill test is responsible for determining that the applicant meets the acceptable standards of knowledge and skill of each TASK within the appropriate skill test standard. Since there is no formal division between the "oral" and "skill" portions of the skill test, this becomes an ongoing process throughout the test. To avoid unnecessary distractions, oral questioning should be used judiciously at all times, especially during the flight portion of the skill test.

(2) Examiners shall test to the greatest extent practicable the applicants correlative abilities rather than mere rote enumeration of facts throughout the skill test.

(3) If the examiner determines that a TASK is incomplete, or the outcome uncertain, the examiner may require the applicant to repeat that TASK, or portions of that TASK. This provision has been made in the interest of fairness and does not mean that instruction, practice, or the repeating of an unsatisfactory TASK is permitted during the licensing process. When practical, the remaining TASKS of the skill test phase should be completed before repeating the questionable TASK.

(4) On multi-engine skill tests where the failure of the most critical engine after lift-off is required, the examiner must give consideration to local atmospheric conditions, terrain, and type of aircraft used. However the failure of an engine shall not be simulated until attaining at least $V_{SSE}/V_{YSE}/V_{YSE}$ and at an altitude not lower than 400 feet AGL.

(5) During simulated engine failures on multi-engine skill tests, the examiner shall set zero thrust after the applicant has simulated feathering the propeller. The

examiner shall require the applicant to demonstrate at least one landing with a simulated feathered propeller with the engine set to zero thrust.

(6) Throughout the flight portion of the skill test, the examiner shall evaluate the applicant's use of visual scanning and collision avoidance procedures.

1.12 SATISFACTORY PERFORMANCE

Satisfactory performance to meet the requirements for licensing is based on the applicants ability to safely:

(1) Perform the TASKS specified in the AREAS OF OPERATION for the licence or rating sought within the approved standards;

(2) Demonstrate mastery of the aircraft with the successful outcome of each TASK performed never seriously in doubt;

(3) Demonstrate satisfactory proficiency and competency within the approved standards;

(4) Demonstrate sound judgement and exercise aeronautical decision making/risk management; and

(5) Demonstrate single-pilot competence if the aircraft is type certificated for single-pilot operations.

1.13 UNSATISFACTORY PERFORMANCE

(1) The tolerances represent the performance expected in good flying conditions. If, in the judgement of the examiner, the applicant does not meet the standards of performance of any TASK performed, the associated AREA OF OPERATION is failed, and therefore, the skill test is failed. The examiner will issue a Notice of Denial to the applicant.

(2) The examiner or applicant may stop the test at any time when the failure of an AREA OF OPERATION makes the applicant ineligible for the licence or rating sought. **The test may be continued ONLY with the consent of the applicant.** If the test is stopped, the applicant is entitled credit for only those AREAS OF OPERATION and their associated TASKS that were satisfactorily performed. However, during the retest, and at the discretion of the examiner, any TASK may be re-evaluated, including those previously passed.

(3) Typical areas of unsatisfactory performance and grounds for disqualification are:

(a) Any action or lack of action by the applicant that requires corrective intervention by the examiner to maintain safe flight.

(b) Failure to use proper and effective visual scanning techniques, when applicable, to clear the area before and while performing manoeuvres.

(c) Consistently exceeding tolerances stated in the OBJECTIVES.

(d) Failure to take prompt corrective action when tolerances are exceeded.

(4) When the Notice of Denial is issued, the examiner shall record the applicant's unsatisfactory performance in terms of the AREA OF OPERATION and specific TASK(S) not meeting the standard appropriate to the skill test conducted. The AREA(s) OF OPERATION/TASK(S) not tested and the number of skill test failures shall also be recorded. If the applicant fails the skill test because of a special emphasis area, the Notice of Disapproval shall indicate the associated TASK. For example, AREA OF OPERATION VI, TASK E, Landing From a Straight-in or Circling Approach, failure to avoid runway incursion.

(5) In the case of a retest after failure, an applicant may be given credit for those AREAS OF OPERATIONS successfully completed on the previous skill test, provided the previous test was conducted within 60 days before the retest. If the

previous test was conducted more than 60 days before the retest, the examiner must test the applicant in all areas of operation and all TASKS.

1.14 DISCONTINUANCE OF A SKILL TEST

When a skill test is stopped for reasons other than unsatisfactory performance (i.e., equipment failure, weather, or illness), the SLCAA Airman Licence and/or Rating Application and, if applicable, the Airman
Knowledge Test Report shall be returned to the applicant. The examiner at that time shall prepare, sign, and issue a Letter of Discontinuance to the applicant. The Letter of Discontinuance should identify the AREAS OF OPERATION and their associated TASKS of the skill test that were successfully completed. The applicant shall be advised that the Letter of Discontinuance shall be presented to the examiner when the skill test is resumed, and made part of the licensing file.

1.15 AERONAUTICAL DECISION MAKING AND RISK MANAGEMENT

(1) The examiner shall evaluate the applicant's ability throughout the skill test to use good aeronautical decision-making procedures in order to evaluate risks. The examiner shall accomplish this requirement by developing scenarios that incorporate as many TASKS as possible to evaluate the applicant's risk management in making safe aeronautical decisions. For example, the examiner may develop a scenario that incorporates weather decisions and performance planning.

(2) The applicant's ability to utilise all the assets available in making a risk analysis to determine the safest course of action is essential for satisfactory performance. The scenarios should be realistic and within the capabilities of the aircraft used for the skill test.

1.16 CREW RESOURCE MANAGEMENT (CRM)

(1) CRM refers to the effective use of all available resources; human resources, hardware, and information. Human resources includes all other groups routinely working with the cockpit crew (or if it is a single-pilot operation, the pilot) who are involved in decisions that are required to operate a flight safely. These groups include, but are not limited to: flight operations officers, cabin crew members, maintenance personnel, and air traffic controllers. CRM is not a single TASK. CRM is a set of skill competencies which must be evident in all TASKS in this skill test standard as applied to the single-pilot or the multi-crew operation. CRM competencies, grouped into three clusters of observable behaviour, are:

(a) COMMUNICATIONS PROCESSES AND DECISIONS

1. Briefing/debriefing
2. Inquiry/advocacy/assertiveness
3. Self-critique
4. Communication with available personnel resources
5. Decision making

(b) BUILDING AND MAINTENANCE OF A FLIGHT TEAM

1. Leadership/followership
2. Interpersonal relationships

(c) WORKLOAD MANAGEMENT AND SITUATIONAL AWARENESS

1. Preparation/planning
2. Vigilance
3. Workload distribution
4. Distraction avoidance
5. Wake turbulence avoidance

(2) CRM deficiencies almost always contribute to the unsatisfactory performance of a TASK. Therefore, the competencies provide an extremely valuable vocabulary for debriefing

(3) The standards for each CRM competency as generally stated and applied are subjective. Conversely, some of the competencies may be found objectively stated as required operational procedures for one or more TASKS. Examples of the latter include briefings, radio calls, and instrument approach callouts. Whether subjective or objective, application of CRM competencies is dependent upon the composition of the crew.

1.17 SINGLE-PILOT RESOURCE MANAGEMENT (SRM)

(1) The examiner shall evaluate the applicants ability throughout the skill test to use good aeronautical decision–making procedures in order to evaluate risks. The examiner shall accomplish this requirement by developing a scenario that incorporates as many TASKS as possible to evaluate the applicants risk management in making safe aeronautical decisions. For example, the examiner may develop a scenario that incorporates weather decisions and performance planning.

(2) The applicant's ability to utilise all the assets available in making a risk analysis to determine the safest course of action is essential for satisfactory performance. The scenario should be realistic and within the capabilities of the aircraft used for the skill test.

(3) Single-pilot resource management is defined as the art and science of managing all the resources ALL available resources (both onboard the aircraft and from outside sources) available to a single pilot (prior and during flight) to ensure that the successful outcome of the flight is never in doubt. SRM available resources can include human resources, hardware, and information. It is similar to Crew Resource Management (CRM) procedures that are being emphasised in multi-crew member operations except that only one crew member (the pilot) is involved. Human resources "include all other groups routinely working with the pilot who are involved in decisions that are required to operate a flight safely. These groups include, but are not limited to: dispatchers, weather briefers, maintenance personnel, and air traffic controllers." SRM is not a single TASK; it is a set of skill competencies that must be evident in all TASKS in this skill test standard as applied to single-pilot operation.

(4) The following six items are areas of SRM:

A. Aeronautical Decision-Making

Objective: To determine that the applicant exhibits sound aeronautical decision-making during the planning and execution of the planned flight. The applicant should:

(1) Use a sound decision–making process, such as the DECIDE model, 3P model, or similar process when making critical decisions that will have an effect on the outcome of the flight. The applicant should be able to explain the factors and alternative courses of action that were considered while making the decision.

(2) Recognise and explain any hazardous attitudes that may have influenced any decision.

(3) Decide and execute an appropriate course of action to properly handle any situation that arises that may cause a change in the original flight plan in such a way that leads to a safe and successful conclusion of the flight.

(4) Explain how the elements of risk management, DFIT awareness, overall situational awareness, use of automation, and TASK management influenced the decisions made and the resulting course of action.

B. Risk Management

Objective: To determine that the applicant can utilise risk management tools and models to assess the potential risk associated with the planned flight during pre-flight planning and while in flight. The applicant should:

(1) Explain the four fundamental risk elements associated with the flight being conducted in the given scenario and how each one was assessed.

(2) Use a tool, such as the PAVE checklist, to help assess the four risk elements.

(3) Use a personal checklist, such as the IM SAFE checklist, to determine personal risks.

(4) Use weather reports and forecasts to determine weather risks associated with the flight.

(5) Explain how to recognise risks and how to mitigate those risks throughout the flight.

(6) Use of the 5P model to assess the risks associated with each of the five factors.

C. Task Management

Objectives: To determine that the applicant can prioritise the various TASKS associated with the planning and execution of the flight. The applicant should:

(1) Explain how to prioritise TASKS in such a way to minimise distractions from flying the aircraft.

(2) Complete all TASKS in a timely manner considering the phase of flight without causing a distraction from flying.

(3) Execute all checklists and procedures in a manner that does not increase workload at critical times.

D. Situational Awareness

Objectives: To determine that the applicant can maintain situational awareness during all phases of the flight. The applicant should:

(1) Explain the concept of situational awareness and associated factors.

(2) Explain the dangers associated with becoming fixated on a particular problem to the exclusion of other aspects of the flight.

(3) State the current situation at any time during the flight in such a way that displays an accurate assessment of the current and future status of the flight, including weather, terrain, traffic, ATC situation, fuel status, and aircraft status.

(4) Explain taxi operation planning procedures, such as recording taxi instructions, reading back taxi clearances, and reviewing taxi routes on the aerodrome diagram.

(5) Explain procedures for steering, manoeuvring, maintaining taxi, runway position, and situational awareness.

(6) Explain procedures for holding the pilots workload to a minimum during taxi which should increase the pilots awareness during taxiing.

(7) ATC communications and pilot operations before take-off, before landing, and after landing at controlled and uncontrolled aerodromes.

(8) Uses the navigation displays, traffic displays, terrain displays, weather displays, and other features of the aircraft to maintain a complete and

accurate awareness of the current situation and any reasonably anticipated changes that may occur.

E. Controlled Flight Into Terrain Awareness

Objectives: To determine that the applicant can accurately assess risks associated with terrain and obstacles, maintain accurate awareness of terrain and obstacles, and use appropriate techniques and procedures to avoid controlled flight into terrain or obstacles by using all resources available. The applicant should:

(1) Use current charts and procedures during the planning of the flight to ensure that the intended flightpath avoids terrain and obstacles.

(2) Be aware of potential terrain and obstacles hazards along the intended route.

(3) Explain the terrain display, TAWS, and/or GPWS as installed in the aircraft.

(4) Use the terrain display, TAWS, and/or GPWS of the navigation displays as appropriate to maintain awareness and to avoid terrain and obstacles.

(5) Plan departures and arrivals to avoid terrain and obstacles.

(6) Alter flight as necessary to avoid terrain.

(7) Plan any course diversion, for whatever reason, in such a way to ensure proper terrain and obstruction clearance to the new destination.

(8) Explain and understand aircraft performance limitations associated with CFIT accidents.

F. Automation Management

Objective: To determine that the applicant can effectively use the automation features of the aircraft, including autopilot and flight management systems, in such a way to manage workload and can remain aware of the current and anticipated modes and status of the automation. The applicant should:

(1) Explain how to recognise the current mode of operation of autopilot/FMS.

(2) Explain how to recognise anticipated and unanticipated mode or status changes of the autopilot/FMS.

(3) State at any time during the flight the current mode or status and what the next anticipated mode or status will be.

(4) Use the autopilot/FMS to reduce workload as appropriate for the phase of flight during emergency or abnormal operations.

(5) Recognise unanticipated mode changes in a timely manner and promptly return the automation to the correct mode.

1.18 HOW THE EXAMINER APPLIES CREW RESOURCE MANAGEMENT

(1) Examiners are required to exercise proper CRM competencies in conducting tests as well as expecting the same from applicants.

(2) Pass/fail judgements based solely on CRM issues must be carefully chosen since they may be entirely subjective. Those pass/fail judgements which are not subjective apply to CRM-related procedures in SLCAA-approved operations manuals that must be accomplished, such as briefings to other crew members. In such cases, the operator (or the aircraft manufacturer) specifies what should be briefed and when the briefings should occur. The examiner may judge objectively whether the briefing requirement was or was not met. In those cases where the operator (or aircraft manufacturer) has not specified a briefing, the examiner shall require the applicant to brief the appropriate items from the following note. The examiner may then judge objectively whether the briefing requirement was or was not met.

(3) The majority of aviation accidents and incidents are due to resource management failures by the pilot/crew; fewer are due to technical failures. Each applicant shall give a crew briefing before each take-off/departure and approach/landing. If the operator or aircraft manufacturer has not specified a briefing, the briefing shall cover the appropriate items, such as runway, SID/STAR/IAP, power settings, speeds, abnormals or emergency prior to or after take-off, emergency return intentions, missed approach procedures, FAF, altitude at FAF, initial rate of descent, DH/MDA, time to missed approach, and what is expected of the other crew members during the take-off/SID and approach/landing. If the first take-off/departure and approach/landing briefings are satisfactory, the examiner may allow the applicant to brief only the changes, during the remainder of the flight.

1.19 APPLICANT USE OF CHECKLISTS

Throughout the skill test, the applicant is evaluated on the use of an appropriate checklist. Proper use is dependent on the specific TASK being evaluated. The situation may be such that the use of the checklist, while accomplishing elements of an OBJECTIVE, would be either unsafe or impracticable, especially in a single-pilot operation. In this case, a review of the checklist after the elements have been accomplished would be appropriate. Division of attention and proper visual scanning should be considered when using a checklist.

1.20 USE OF DISTRACTIONS DURING SKILL TESTS

Numerous studies indicate that many accidents have occurred when the pilot has been distracted during critical phases of flight. To evaluate the pilot's ability to utilise proper control technique while dividing attention both inside and/or outside the cockpit, the examiner shall cause a realistic distraction during the flight portion of the skill test to evaluate the applicant's ability to divide attention while maintaining safe flight.

1.21 POSITIVE EXCHANGE OF FLIGHT CONTROLS

(1) During flight, there must always be a clear understanding between pilots of who has control of the aircraft. Prior to flight, a briefing should be conducted that includes the procedure for the exchange of flight controls. A positive three-step process in the exchange of flight controls between pilots is a proven procedure and one that is strongly recommended.

(2) When one pilot wishes to give the other pilot control of the aircraft, he or she will say, "You have the flight controls." The other pilot acknowledges immediately by saying, "I have the flight controls."

The first pilot again says "You have the flight controls." When control is returned to the first pilot, follow the same procedure. A visual check is recommended to verify that the exchange has occurred. There should never be any doubt as to who is flying the aircraft.

1.22 RATING TASK TABLE

(1) The following tables indicate the areas of operations required during a skill test for an additional commercial pilot rating in another aircraft class or category.

(a) Aeroplane Multi-Engine Land

ADDITION OF AN AEROPLANE MULTI-ENGINE LAND RATING TO AN EXISTING COMMERCIAL PILOT LICENCE							
Required TASKS are indicated by either the TASK letter(s) that apply(s) or an indication that all or none of the TASKS must be tested based on the notes in each AREA OF OPERATION.							
COMMERCIAL PILOT RATING(S) HELD							
AREAS OF OPER-ATION	**ASEL**	**ASES**	**AMES**	**Helicopter**	**Glider**	**Balloon**	**Airship**
I	F,G,H	F,G,H	F,G	F,G,H	F,G,H	F,G,H	F,G,H
II	ALL	ALL	D	ALL	ALL	ALL	ALL
III	NONE	C	C	B,C	B,C	B,C	B,C
IV	A,B,C,D	A,B,C,D	A,B,C,D	A,B,C,D,I	A,B,C,D,I	A,B,C,D,I	A,B,C,D,I
V	ALL	ALL	NONE	ALL	ALL	ALL	ALL
VI	NONE	NONE	NONE	NONE	ALL	ALL	NONE
VII	ALL	ALL	NONE	ALL	ALL	ALL	ALL
VIII	ALL	ALL	B,D,E	ALL	ALL	ALL	ALL
IX	NONE	NONE	NONE	ALL	ALL	ALL	ALL
X	ALL	ALL	NONE	ALL	ALL	ALL	ALL
XI	NONE	A	A	A	A	A	A

(b) Aeroplane Multi-Engine Sea

ADDITION OF AN AEROPLANE MULTI-ENGINE SEA RATING TO AN EXISTING COMMERCIAL PILOT LICENCE							
Required TASKS are indicated by either the TASK letter(s) that apply(s) or an indication that all or none of the TASKS must be tested based on the notes in each AREA OF OPERATION.							
COMMERCIAL PILOT RATING(S) HELD							
AREAS OF OPER-ATION	**AMEL**	**ASEL**	**ASES**	**Helicopter**	**Glider**	**Balloon**	**Airship**
I	F,G,I,J	F,G,H,I,J	F,G,H	F,G,H,I,J	F,G,H,I,J	F,G,H,I,J	F,G,H,I,J
II	E	ALL	ALL	ALL	ALL	ALL	ALL
III	C	C	NONE	B,C	B,C	B,C	B,C
IV	A,B,C,D,E, F,G,H	A,B,C,D,E, F,G,H	A,B,C,D,E,F ,G,H	ALL	ALL	ALL	ALL
V	NONE	ALL	ALL	ALL	ALL	ALL	ALL
VI	NONE	NONE	NONE	NONE	ALL	ALL	NONE
VII	NONE	ALL	ALL	ALL	ALL	ALL	ALL
VIII	B,D,E	ALL	ALL	ALL	ALL	ALL	ALL

IX	NONE	NONE	NONE	ALL	ALL	ALL	ALL
X	NONE	ALL	ALL	ALL	ALL	ALL	ALL
XI	B,C,D	B,C,D	NONE	ALL	ALL	ALL	ALL

(c) Aeroplane Single-Engine Land

ADDITION OF AN AEROPLANE SINGLE-ENGINE LAND RATING TO AN EXISTING COMMERCIAL PILOT LICENCE							
Required TASKS are indicated by either the TASK letter(s) that apply(s) or an indication that all or none of the TASKS must be tested based on the notes in each AREA OF OPERATION.							
COMMERCIAL PILOT RATING(S) HELD							
AREAS OF OPER-ATION	**ASES**	**AMEL**	**AMES**	**Helicopter**	**Glider**	**Balloon**	**Airship**
I	F,G	F,G	F,G	F,G	F,G	F,G	F,G
II	D	NONE	D	A,C,D,F	A,B,C,D,F	A,B,C,D,F	A,B,C,D,F
III	C	NONE	C	B,C	B,C	B,C	B,C
IV	A,B,C,D,E ,F, K	A,B,C,D,E ,F, K	A,B,C,D,E ,F ,K	A,B,C,D,E,F, K, L	A,B,C,D,E ,F, K,L	A,B,C,D,E ,F, K,L	A,B,C,D,E,F, K,L
V	NONE	B,C,D	B,C,D	ALL	ALL	ALL	ALL
VI	NONE	ALL	ALL	ALL	ALL	ALL	ALL
VII	NONE	NONE	NONE	NONE	ALL	ALL	NONE
VIII	NONE	NONE	NONE	ALL	ALL	ALL	ALL
IX	A,B	A,B	A,B	ALL	ALL	ALL	ALL
X	NONE	NONE	NONE	ALL	ALL	ALL	ALL
XI	A	NONE	A	A	A	A	A

(d) Aeroplane Single-Engine Sea

ADDITION OF AN AEROPLANE SINGLE-ENGINE SEA RATING TO AN EXISTING COMMERCIAL PILOT LICENCE							
Required TASKS are indicated by either the TASK letter(s) that apply(s) or an indication that all or none of the TASKS must be tested based on the notes in each AREA OF OPERATION.							
COMMERCIAL PILOT RATING(S) HELD							
AREAS OF OPER-ATION	**ASEL**	**AMEL**	**AMES**	**Helicopter**	**Glider**	**Balloon**	**Airship**
I	F,G,H,I	F,G,H,I	F,G	F,G,H,I	F,G,H,I	F,G,H,I	F,G,H,I
II	E	E	E	A,B,C,E,F	A,B,C,E,F	A,B,C,E,F	A,B,C,E,F

III	C	C	NONE	B,C	B,C	B,C	B,C
IV	A,B,E,F,G, H,I,J	A,B,E,F,G, H ,I,J	A,B,E,F,G,H, I ,J	A,B,E,F,G,H,I , J,K,L	A,B,E,F,G,H, I ,J,K,L	A,B,E,F,G,H,I , J,K,L	A,B,E,F,G,H,I, J, K,L
V	NONE	B,C,D	B,C,D	ALL	ALL	ALL	ALL
VI	NONE	ALL	ALL	ALL	ALL	ALL	ALL
VII	NONE	NONE	NONE	NONE	ALL	ALL	NONE
VIII	NONE	NONE	NONE	ALL	ALL	ALL	ALL
IX	A,B	A,B	A,B	ALL	ALL	ALL	ALL
X	NONE	NONE	NONE	ALL	ALL	ALL	ALL
XI	B,C,D	B,C,D	NONE	B,C,D	B,C,D	B,C,D	B,C,D

SECTION TWO: COMMERICAL PILOT LICENCE – AEROPLANE SINGLE-ENGINE SKILL TEST STANDARDS

1.1 APPLICANT'S SKILL TEST CHECKLIST

APPOINTMENT WITH EXAMINER

EXAMINER'S NAME:

LOCATION:_____

DATE/TIME:_____

ACCEPTABLE AIRCRAFT

Aircraft Documents

Airworthiness Certificate

Registration Certificate

Operating Limitations

Aircraft Maintenance Records

Logbook Record of Airworthiness Inspections and AD Compliance

Pilot's Operating Handbook, SLCAA-Approved

Aircraft Flight Manual

PERSONAL EQUIPMENT

Current Aeronautical Charts

Computer and Plotter

Flight Plan Forms

Flight Logs

Current AIM, Airport Facility Directory, and Appropriate Publications

View-Limiting Device if Applicable

PERSONAL RECORDS

Identification (Government Issue ID with Photo/Signature, Date of Birth, Actual Residential Address)

Personnel Licence if applicable

Current and Appropriate Medical Certificate

Completed Application Form (for a Licence and/or Rating with Instructor's Signature If applicable)

Identification (Government Issue ID with Photo/Signature, Date of Birth, Actual Residential Address)

Personnel Licence if applicable

Current and Appropriate Medical Certificate

Completed Application Form (for a Licence and/or Rating with Instructor's Signature If applicable)

Computer Test Report

Knowledge Test Report if applicable

Logbook with appropriate Instructor Endorsements

Notice of Discontinuance if applicable

Notice of Disapproval (if applicable)

Approved Training Organisation Certificate (if applicable)

Certificate of Language Proficiency (From Language Learning or Testing Centre) if applicable

Radiotelephony Licence if applicable

Examiner's Fee (if applicable)

1.2 EXAMINER'S SKILL TEST CHECKLIST

Airplane Single-Engine Land (ASEL) and Airplane Single-Engine Sea (ASES)

APPLICANT'S NAME:_____

LOCATION:_____

DATE/TIME:_____

I. PREFLIGHT PREPARATION

- **A.** Certificates and Documents (ASEL and ASES)
- **B.** Airworthiness Requirements (ASEL and ASES)
- **C.** Weather Information (ASEL and ASES)
- **D.** Cross-Country Flight Planning (ASEL and ASES)
- **E.** National Airspace System (ASEL and ASES)
- **F.** Performance and Limitations (ASEL and ASES)
- **G.** Operation of Systems (ASEL and ASES)
- **H.** Water and Seaplane Characteristics (ASES)
- **I.** Seaplane Bases, Maritime Rules, and Aids to Marine Navigation (ASES)
- **J.** Aeromedical Factors (ASEL and ASES)

II. PREFLIGHT PROCEDURES

- **A.** Preflight Inspection (ASEL and ASES)
- **B.** Cockpit Management (ASEL and ASES)
- **C.** Engine Starting (ASEL and ASES)
- **D.** Taxiing (ASEL)
- **E.** Taxiing and Sailing (ASES)
- **F.** Before Takeoff Check (ASEL and ASES)

III. AIRPORT AND SEAPLANE BASE OPERATIONS

- **A.** Radio Communications and ATC Light Signals (ASEL and ASES)
- **B.** Traffic Patterns (ASEL and ASES)
- **C.** Airport/Seaplane Base, Runway, and Taxiway Signs, Markings, and Lighting (ASEL and ASES)

IV. TAKEOFFS, LANDINGS, AND GO-AROUNDS

- **A.** Normal and Crosswind Takeoff and Climb (ASEL and ASES)
- **B.** Normal and Crosswind Approach and Landing (ASEL and ASES)
- **C.** Soft-Field Takeoff and Climb (ASEL)
- **D.** Soft-Field Approach and Landing (ASEL)
- **E.** Short-Field (Confined Area—ASES) Takeoff and Maximum Performance Climb (ASEL and ASES)
- **F.** Short-Field Approach (Confined Area—ASES) and Landing (ASEL and ASES)
- **G.** Glassy Water Takeoff and Climb (ASES)
- **H.** Rough Water Takeoff and Climb (ASES)
- **I.** Rough Water Takeoff and Climb (ASES)

J. Rough Water Approach and Landing (ASES)
K. Power-Off 180° Accuracy Approach and Landing (ASEL and ASES)
L. Go-Around/Rejected Landing (ASEL and ASES)

V. PERFORMANCE MANEUVERS

A. Steep Turns (ASEL and ASES)
B. Steep Spiral (ASEL and ASES)
C. Chandelles (ASEL and ASES)
D. Lazy Eights (ASEL and ASES)

VI. GROUND REFERENCE MANEUVER

A. Eights on Pylons (ASEL and ASES)

VII. NAVIGATION

A. Pilotage and Dead Reckoning (ASEL and ASES)
B. Navigation Systems and Radar Services (ASEL and ASES)
C. Diversion (ASEL and ASES)
D. Lost Procedures (ASEL and ASES)

VIII. SLOW FLIGHT AND STALLS

A. Maneuvering During Slow Flight (ASEL and ASES)
B. Power-Off Stalls (ASEL and ASES)
C. Power-On Stalls (ASEL and ASES)
D. Spin Awareness (ASEL and ASES)

1.3 AREAS OF OPERATION

I. AREA OF OPERATION: PRE-FLIGHT PREPARATION

Note: The examiner shall develop a scenario based on real time weather to evaluate TASKS C and D.

A. TASK: CERTIFICATES AND DOCUMENTS (ASEL and ASES)

References: SLCAR Parts 1A, 6 and 8, POH/AFM

Objective: To determine that the applicant exhibits satisfactory knowledge of the elements related to certificates and documents by:

(1) EXPLAINING
- (a) Commercial pilot licence privileges limitations and recent flight experience requirements
- (b) Medical certificate class and duration
- (c) Pilot logbook or flight records

(2) LOCATING AND EXPLAINING
- (a) Airworthiness and registration certificates
- (b) Operating limitations, placards, instrument markings, and POH/AFM
- (c) Weight and balance data and equipment list

B. TASK: AIRWORTHINESS REQUIREMENTS (ASEL and ASES)

References: SLCAR Part 6

Objective: To determine that the applicant exhibits satisfactory knowledge of the elements related to airworthiness requirements by:

(1) EXPLAINING
- (a) Required instruments and equipment for day/night VFR
- (b) Procedures and limitations for determining airworthiness of the aeroplane with inoperative instruments and equipment with and without an MEL
- (c) Requirements and procedures for obtaining a special flight permit

(2) LOCATING AND EXPLAINING

(a) Airworthiness directives
(b) Compliance records
(c) Maintenance/inspection requirements
(d) Appropriate record keeping

C. TASK: WEATHER INFORMATION (ASEL and ASES)

References: SLCAR Part 6

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to weather information by analysing weather reports, charts, and forecasts from various sources with emphasis on:

(a) METAR, TAF, and FA
(b) Surface analysis chart
(c) Radar summary chart
(d) Winds and temperature aloft chart
(e) Significant weather prognostic charts
(f) Convective outlook chart
(g) AWOS, ASOS, and ATIS reports
(h) SIGMETs and AIRMETS
(i) PIREPs
(j) Windsheer reports

(k) Icing and freezing level information
(2) Makes a competent "go/no-go" decision based on available weather information.

D. TASK: CROSS-COUNTRY FLIGHT PLANNING (ASEL and ASES)
References: SLCAR Part 6
Objective: To determine that the applicant:
(1) Exhibits satisfactory knowledge of the elements related to cross-country flight planning by presenting and explaining a pre-planned VFR cross-country flight, as previously assigned by the examiner. On the day of the skill test, the final flight plan shall be to the first fuel stop, based on maximum allowable passengers, baggage, and/or cargo loads using real time weather.
(2) Uses appropriate and current aeronautical charts
(3) Properly identifies airspace, obstructions, and terrain features.
(4) Selects easily identifiable en route checkpoints.
(5) Selects most favourable altitudes considering weather conditions and equipment capabilities.
(6) Computes headings, flight time, and fuel requirements.
(7) Selects appropriate navigation system/facilities and communication frequencies.
(8) Applies pertinent information from NOTAMs, A/FD, and other flight publications.
(9) Completes a navigation log and simulates filing a VFR flight plan.

E. TASK: NATIONAL AIRSPACE SYSTEM (ASEL and ASES)
References: SLCAR Part 6
Objective: To determine that the applicant exhibits satisfactory knowledge of the elements related to the National Airspace System by explaining:
(1) Basic VFR weather minimums – for all classes of airspace.
(2) Airspace classes – their operating rules, pilot certification, and aeroplane equipment requirements for the following:
  (a) Class A
  (b) Class B
  (c) Class C
  (d) Class D
  (e) Class E
  (f) Class G
(3) Special use and other airspace areas.

F. TASK: PERFORMANCE AND LIMITATIONS (ASEL and ASES)
References: POH/AFM
Objective: To determine that the applicant:
(1) Exhibits satisfactory knowledge of the elements related to performance and limitations by explaining the use of charts, tables, and data to determine performance and the adverse effects of exceeding limitations.
(2) Computes weight and balance. Determines if the computed weight and centre of gravity is within the aeroplane operating limitations and if the weight and centre of gravity will remain within limits during all phases of flight.
(3) Demonstrates use of the appropriate performance charts, tables, and data.
(4) Describes the effects of atmospheric conditions on the aeroplane performance.

G. TASK: OPERATION OF SYSTEMS (ASEL and ASES)

References: POH/AFM

Objective: To determine that the applicant exhibits satisfactory knowledge of the elements related to the operation of systems on the aeroplane provided for the skill test, by explaining at least five (5) of the following systems.

(1) Primary flight controls and trim
(2) Flaps, leading edge devices, and spoilers
(3) Water rudders (ASES)
(4) Powerplant and propeller
(5) Landing gear
(6) Fuel, oil, and hydraulic
(7) Electrical
(8) Avionics
(9) Pitot-static, vacuum/pressure and associated flight instruments
(10) Environmental
(11) De-icing and anti-icing

H. TASK: WATER AND SEAPLANE CHARACTERISTICS (ASES)

Objective: To determine that the applicant exhibits satisfactory knowledge of the elements related to water and seaplane characteristics by explaining:

(1) The characteristics of a water surface as affected by features, such as:
  (a) Size and location
  (b) Protected and unprotected areas
  (c) Surface wind
  (d) Direction and strength of water current
  (e) Floating and partially submerged debris
  (f) Sandbars, islands, and shoals
  (g) Vessel traffic, and wakes
  (h) Other features peculiar to the area
(2) Float and hull construction, and their effect on seaplane performance.
(3) Causes of porpoising and skipping, and the pilot action required to prevent or correct these occurrences.

I. TASK: SEAPLANE BASES, MARITIME RULES, AND AIDS TO MARINE NAVIGATION (ASES)

Objective: To determine that the applicant exhibits satisfactory knowledge of the elements related to seaplane bases, maritime rules, and aids to marine navigation by explaining:

(1) How to locate and identify seaplane bases on charts or in directories
(2) Operating restrictions at various bases
(3) Right-of-way, steering, and sailing rules pertinent to seaplane operation
(4) Marine navigation aids, such as buoys, beacons, lights, and sound signals

J. TASK: AEROMEDICAL FACTORS (ASEL and ASES)

Objective: To determine that the applicant exhibits satisfactory knowledge of the elements related to aeromedical factors by explaining:

(1) The symptoms, causes, effects, and corrective actions of at least four (4) of the following:
  (a) Hypoxia
  (b) Hyperventilation

(c) Middle ear and sinus problems
(d) Spatial disorientation
(e) Motion sickness
(f) Carbon monoxide poisoning
(g) Stress and fatigue
(h) Dehydration

(2) The effects of alcohol, drugs, and over-the-counter medications.
(3) The effects of excess nitrogen during scuba dives upon a pilot or passenger in-flight.

II. AREA OF OPERATION: PRE-FLIGHT PROCEDURES

A. TASK: PRE-FLIGHT INSPECTION (ASEL and ASES)

References: POH/AFM
Objective: To determine that the applicant:
(1) Exhibits satisfactory knowledge of the elements related to pre-flight inspection. This shall include which items must be inspected, the reasons for checking each item, and how to detect possible defects.
(2) Inspects the aeroplane with reference to an appropriate checklist.
(3) Verifies that the aeroplane is in condition for safe flight.

B. TASK: COCKPIT MANAGEMENT (ASEL and ASES)

References: POH/AFM
Objective: To determine that the applicant:
(1) Exhibits satisfactory knowledge of the elements related to cockpit management procedures.
(2) Ensures all loose items in the cockpit and cabin are secured.
(3) Organises material and equipment in an efficient manner so they are readily available.
(4) Briefs occupants on the use of safety belts, shoulder harnesses, doors, and emergency procedures.

C. TASK: ENGINE STARTING (ASEL and ASES)

References: POH/AFM
Objective: To determine that the applicant:
(1) Exhibits satisfactory knowledge of the elements related to recommended engine starting procedures. This shall include the use of an external power source, hand propping safety, and starting under various atmospheric conditions.
(2) Positions the aeroplane properly considering structures, surface conditions other aircraft, and the safety of nearby persons and property.
(3) Utilises the appropriate checklist for starting procedure.

D. TASK: TAXIING (ASEL)

References: POH/AFM
Objective: To determine that the applicant:
(1) Exhibits satisfactory knowledge of the elements related to safe taxi procedures
(2) Performs a brake check immediately after the aeroplane begins moving
(3) Positions flight controls properly for the existing wind conditions
(4) Controls direction and speed without excessive use of brakes
(5) Exhibits procedures for steering, manoeuving, maintaining taxiway, runway position, and situational awareness to avoid runway incursions.
(6) Exhibits proper positioning of the aircraft relative to hold lines.

(7) Exhibits procedures to insure clearances/instructions are received and recorded/read back correctly.
(8) Exhibits situational awareness/taxi procedures in the event the aircraft is on a taxiway that is between parallel runways.
(9) Uses a taxi chart during taxi.
(10) Complies with aerodrome/taxiway markings, signals, ATC clearances and instructions
(11) Utilises procedures for eliminating pilot distractions.
(12) Taxies so as to avoid other aircraft and hazards

E. TASK: TAXIING AND SAILING (ASES)

References: POH/AFM
Objective: To determine that the applicant:
(1) Exhibits satisfactory knowledge of the elements related to water taxi and sailing procedures
(2) Positions the flight controls properly for the existing wind conditions
(3) Plans and follows the most favourable course while taxi or sailing considering wind, water current, water conditions and maritime regulations
(4) Uses the appropriate idle, plow, or step taxi technique
(5) Uses flight controls, flaps, doors, water rudder, and power correctly so as to follow the desired course while sailing
(6) Prevents and corrects for porpoising and skipping
(7) Avoids other aircraft, vessels, and hazards
(8) Complies with seaplane base signs, signals, and clearances

F. TASK: RUNWAY INCURSION AVOIDANCE (ASEL and ASES)

Objective: To determine that the applicant exhibits satisfactory knowledge of the elements of runway incursion avoidance by:
(1) Exhibiting distinct challenges and requirements during taxi operations not found in other phases of flight operations.
(2) Exhibiting procedures for appropriate cockpit activities during taxiing including taxi route planning, briefing the location of HOT SPOTS, communicating and coordinating with ATC.
(3) Exhibiting procedures for steering, manoeuvring, maintaining taxiway, runway position, and situational awareness.
(4) Knowing the relevance/importance of hold lines.
(5) Exhibiting procedures to ensure the pilot maintains strict focus to the movement of the aircraft and ATC communications, including the elimination of all distractive activities (i.e... cell phone, texting, conversations with passengers) during taxi operations.
(6) Utilising procedures for holding the pilots workload to a minimum during taxi operations.
(7) Utilising taxi operation planning procedures, such as recording taxi instructions, reading back taxi clearances, and reviewing taxi routes on the aerodrome diagram.
(8) Utilising procedures to insure that clearance or instructions that are actually received a re adhered to rather than the ones expected to be received.
(9) Utilising procedures to maintain/enhance situational awareness when conducting taxi operations in relation to other aircraft operations in the vicinity, as well as to other vehicles moving on the aerodrome.

(10) Exhibiting procedures for briefing if a landing rollout to a taxiway exit will place the pilot in close proximity to another runway which can result in a runway incursion.
(11) Conducting appropriate after landing/taxi procedures in the event the aircraft is on a taxiway that is between parallel runways.
(12) Knowing specific procedures for operations at an aerodrome with an operating air traffic control tower, with emphasis on ATC communications and runway entry/crossing authorisations.
(13) Utilising ATC communications and pilot actions before take-off, before landing, and after landing at towered and non-towered aerodromes.
(14) Knowing procedures unique to night operations.
(15) Knowing operations at non-towered aerodromes.
(16) Knowing the use of aircraft exterior lighting.
(17) Knowing the hazards of low visibility operations.

G TASK: BEFORE TAKE-OFF CHECK (ASEL and ASES)
References: POH/AFM
Objective: To determine that the applicant:
(1) Exhibits satisfactory knowledge of the elements related to the before take-off check. This shall include the reasons for checking each item and how to detect malfunctions
(2) Positions the aeroplane properly considering other aircraft/vessels, wind and surface conditions
(3) Divides attention inside and outside the cockpit
(4) Ensures the engine temperatures and pressure are suitable for run-up and take-off
(5) Accomplishes the before take-off checklist and ensures the aeroplane is in safe operating condition
(6) Reviews take-off performance airspeeds, take-off distances, departure and emergency procedures
(7) Avoids runway incursion and/or ensures no conflict with traffic prior to taxiing into take-off position

III. AREA OF OPERATION: AERODROME AND SEAPLANE BASE OPERATIONS

A. TASK: RADIO COMMUNICATIONS AND ATC LIGHT SIGNALS (ASEL and ASES)
References: SLCAR Part 6
Objective: To determine that the applicant:
(1) Exhibits satisfactory knowledge of the elements related to radio communications and ATC light signals
(2) Selects appropriate frequencies
(3) Transmits using recommended phraseology
(4) Acknowledges radio communications and complies with instructions

B. TASK: TRAFFIC PATTERNS (ASEL and ASES)
Objective: To determine that the applicant:
(1) Exhibits satisfactory knowledge of the elements related to traffic patterns. This shall include procedures at aerodromes with and without operating control towers, prevention of runway incursions, collision avoidance, wake turbulence avoidance, and wind shear

(2) Properly identifies and interprets aerodome/seaplane base runways, taxiway signs, markings, and lighting
(3) Complies with proper traffic pattern procedures
(4) Maintains proper spacing from other aircraft
(5) Corrects for wind-drift to maintain proper ground track
(6) Maintains orientation with runway/landing area in use
(7) Maintains traffic pattern altitude ±100 feet (30 meters), and appropriate airspeed ±10 knots

C. TASK: AERODROME/SEAPLANE BASE, RUNWAY AND TAXIWAY SIGNS, MARKINGS AND LIGHTING (ASEL and ASES)

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to aerodrome/seaplane base, runway, and taxiway operations with emphasis on runway incursion avoidance
(2) Properly identifies and interprets aerodrome/seaplane base, runway, and taxiway signs, markings, and lighting

IV. AREA OF OPERATION: TAKE-OFFS, LANDINGS, AND GO-AROUNDS

A. TASK: NORMAL AND CROSSWIND TAKE-OFF AND CLIMB (ASEL and ASES)

Note: If a crosswind condition does not exist, the applicants knowledge of crosswind elements shall be evaluated through oral testing.

References: POH/AFM

Objective: To determine that the applicant:

(1) Utilises procedures before taxiing onto the runway or take-off area to ensure runway incursion avoidance. Verify ATC clearance/no aircraft on final at non-towered aerodromes before entering the runway, and ensure that the aircraft is on the correct take-off runway.
(2) Exhibits satisfactory knowledge of the elements related to normal and crosswind take-off, climb operations and rejected take-off procedures.
(3) Ascertains wind direction with or without visible wind direction indicators.
(4) Calculates/determines if crosswind component is above his or her ability or that of the aircrafts capability.
(5) Positions the flight controls for the existing wind conditions.
(6) Clears the area, taxies onto the take-off surface and aligns the aeroplane on the runway centre/take-off path.
(7) Retracts the water rudders as appropriate (ASES), and advances the throttle smoothly to take-off power.
(8) Establishes and maintains the most efficient planing/lift-off attitude and corrects for porpoising and skipping (ASES).
(9) Rotates and lifts off at the recommended airspeed, and accelerates to V_Y.
(10) Establishes a pitch attitude that will maintain V_Y, ±5 knots.
(11) Retracts the landing gear if appropriate, and flaps after a positive rate-of-climb is established.
(12) Maintains take-off power and V_Y ±5 knots to a safe manoeuvreing altitude.
(13) Maintains directional control, proper wind-drift correction throughout the take-off and climb.
(14) Complies with noise abatement procedures.
(15) Completes appropriate checklists.

B. TASK: NORMAL AND CROSSWIND APPROACH AND LANDING (ASEL and ASES)

Note: If a crosswind condition does not exist, the applicants knowledge of the crosswind elements shall be evaluated through oral testing.

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to normal and crosswind approach and landing.

(2) Adequately surveys the intended landing area (ASES).

(3) Considers the wind conditions, landing surface, obstructions, and selects a suitable touchdown point.

(4) Establishes the recommended approach and landing configuration and airspeed and adjusts pitch attitude and power as required.

(5) Maintains a stabilised approach and recommended airspeed, or in its absence, not more than 1.3 VSO, ±5 knots, with wind gust factor applied.

(6) Makes smooth, timely, and correct control application during the roundout and touchdown.

(7) Contacts the water at the proper pitch attitude (ASES).

(8) Touches down smoothly at approximate stalling speed (ASEL).

(9) Touches down at or within 200 feet (60 meters) beyond a specified point, with no drift, and with the aeroplanes longitudinal axis aligned with and over the runway centre/landing path.

(10) Maintains crosswind correction and directional control throughout the approach and landing sequence.

(11) Executes a timely go-around decision when the approach cannot be made within the tolerance specified above.

(12) Utilises after landing runway incursion avoidance procedures.

(13) Completes appropriate checklist.

C. TASK: SOFT-FIELD TAKE-OFF AND CLIMB (ASEL)

References: POH/AFM

Objective: To determine that the applicant:

(1) Utilises procedures before taxiing onto the runway or take-off area to ensure runway incursion avoidance. Verify ATC clearance/no aircraft on final at non-towered aerodromes before entering the runway, and ensure that the aircraft is on the correct take-off runway.

(2) Exhibits satisfactory knowledge of the elements related to a soft-field take-off and climb.

(3) Positions the flight controls for existing conditions and to maximise lift as quickly as possible.

(4) Clears the area; taxies onto take-off surface at a speed consistent with safety without stopping while advancing the throttle smoothly to take-off power.

(5) Establishes and maintains a pitch attitude that will transfer the weight of the aeroplane from the wheels to the wings as rapidly as possible.

(6) Lifts off at the lowest possible airspeed and remains in ground effect while accelerating to VX or VY, as appropriate.

(7) Establishes a pitch attitude for VX or VY, as appropriate, and maintains selected airspeed ±5 knots, during the climb.

(8) Retracts the landing gear, if appropriate and flaps after clear of any obstacles or as recommended by the manufacturer.

(9) Maintains take-off power and VX or VY ±5 knots to a safe manoeuvreing altitude.
(10) Maintains directional control and proper wind-drift correction throughout the take-off and climb.
(11) Completes appropriate checklist.

D. TASK: SOFT-FIELD APPROACH AND LANDING (ASEL)

References: POH/AFM
Objective: To determine that the applicant:
(1) Exhibits satisfactory knowledge of the elements related to a soft-field approach and landing.
(2) Considers the wind conditions, landing surface, and obstructions, and selects the most suitable touchdown area.
(3) Establishes the recommended approach and landing configuration and airspeed; adjusts pitch attitude and power as required.
(4) Maintains a stabilised approach and recommended airspeed, or in its absence, not more than 1.3 VSO, ±5 knots, with wind gust factor applied.
(5) Makes smooth, timely, and correct control application during the roundout and touchdown.
(6) Touches down softly, with no drift, and with the aeroplanes longitudinal axis aligned with the runway/landing path.
(7) Maintains crosswind correction and directional control throughout the approach and landing sequence.
(8) Maintains proper position of the flight controls and sufficient speed to taxi on the soft surface.
(9) Utilises after landing runway incursion avoidance procedures.
(10) Completes appropriate checklist.

E. TASK: SHORT-FIELD TAKE-OFF (CONFINED AREA – ASES) AND MAXIMUM PERFORMANCE CLIMB (ASEL and ASES)

References: POH/AFM
Objective: To determine that the applicant:
(1) Utilises procedures before taxiing onto the runway or take-off area to ensure runway incursion avoidance. Verify ATC clearance/no aircraft on final at non-towered aerodromes before entering the runway, and ensure that the aircraft is on the correct take-off runway.
(2) Exhibits satisfactory knowledge of the elements related to a short-field (confined area ASES) take-off and maximum performance climb.
(3) Positions the flight controls for the existing wind conditions, sets flaps as recommended.
(4) Clears the area; taxies into take-off position utilising maximum available take-off area and aligns the aeroplane on the runway centre/take-off path.
(5) Selects an appropriate take-off path for the existing conditions (ASES).
(6) Applies brakes (if appropriate) while advancing the throttle smoothly to take-off power.
(7) Establishes and maintains the most efficient planing/lift-off attitude and corrects for porpoising and skipping (ASES).
(8) Lifts off at the recommended airspeed, and accelerates to recommended obstacle clearance airspeed, or VX.

(9) Establishes a pitch attitude that will maintain the recommended obstacle clearance airspeed, or VX,+5/-0 knots, until the obstacle is cleared, or until the aeroplane is 50 feet (20 meters) above the surface.
(10) After clearing the obstacle, establishes the pitch attitude for VY, accelerates to VY, and maintains VY, ±5 knots, during the climb.
(11) Retracts the landing gear, if appropriate and flaps after clear of any obstacles or as recommended by manufacturer.
(12) Maintains take-off power and VY ±5 knots to a safe manoeuvreing altitude.
(13) Maintains directional control and proper wind-drift correction throughout the take-off and climb.
(14) Completes appropriate checklist.

F. TASK: SHORT-FIELD APPROACH (CONFINED AREA – ASES) AND LANDING (ASEL AND ASES)

References: POH/AFM
Objective: To determine that the applicant:
(1) Exhibits satisfactory knowledge of the elements related to a short-field (confined area ASES) approach and landing.
(2) Adequately surveys the intended landing area (ASES).
(3) Considers the wind conditions, landing surface, obstructions, and selects the most suitable touchdown point.
(4) Establishes the recommended approach and landing configuration and airspeed; adjusts pitch attitude and power.
(5) Maintains a stabilised approach and recommended approach airspeed, or in its absence, not more than 1.3 VSO, ±5 knots, with wind gust factor applied.
(6) Makes smooth, timely, and correct control application during the roundout and touchdown.
(7) Selects the proper landing path, contacts the water at the minimum safe airspeed with the proper pitch attitude for the surface conditions (ASES).
(8) Touches down smoothly at minimum control airspeed (ASEL).
(9) Touches down at or within 100 feet (30 meters) beyond a specified point, with no side drift, minimum float and with the aeroplanes longitudinal axis aligned with and over the runway centre/landing path.
(10) Maintains crosswind correction and directional control throughout the approach and landing sequence.
(11) Applies brakes (ASEL) or elevator control (ASES), as necessary, to stop in the shortest distance consistent with safety.
(12) Utilises after landing runway incursion avoidance procedures.
(13) Completes appropriate checklist.

G. TASK: GLASSY WATER TAKE-OFF AND CLIMB (ASES)

Note: If a glassy water condition does not exist, the applicant shall be evaluated by simulating the TASK.
References: POH/AFM
Objective: To determine that the applicant:
(1) Exhibits satisfactory knowledge of the elements related to glassy water take-off and climb.
(2) Positions the flight controls and flaps for the existing conditions.
(3) Clears the area; selects an appropriate take-off path considering surface hazards and/or vessels and surface conditions.

(4) Retracts the water rudders as appropriate; advances the throttle smoothly to take-off power.
(5) Establishes and maintains an appropriate planing attitude, directional control, and corrects for porpoising, skipping, and increases in water drag.
(6) Utilises appropriate techniques to lift seaplane from the water considering surface conditions.
(7) Establishes proper attitude/airspeed, and accelerates to VY, ±5 knots during the climb.
(8) Retracts the landing gear, if appropriate, and flaps after a positive rate-of-climb is established.
(9) Maintains take-off power and VY ±5 knots to a safe manoeuvreing altitude.
(10) Maintains directional control and proper wind-drift correction throughout take-off and climb.
(11) Completes the appropriate checklist.

H. TASK: GLASSY WATER APPROACH AND LANDING (ASES)

Note: If a glassy water condition does not exist, the applicant shall be evaluated by simulating the TASK.

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to glassy water approach and landing.
(2) Adequately surveys the intended landing area.
(3) Considers the wind conditions, water depth, hazards, surrounding terrain, and other watercraft.
(4) Selects the most suitable approach path, and touchdown area.
(5) Establishes the recommended approach and landing configuration and airspeed, and adjusts pitch attitude and power as required.
(6) Maintains a stabilised approach and the recommended approach airspeed, ±5 knots and maintains a touchdown pitch attitude and descent rate from the last altitude reference until touchdown.
(7) Makes smooth, timely, and correct power and control adjustments to maintain proper pitch attitude and rate of descent to touchdown.
(8) Contacts the water in the proper pitch attitude, and slows to idle taxi speed.
(9) Maintains crosswind correction and directional control throughout the approach and landing sequence.
(10) Completes the appropriate checklist.

I. TASK: ROUGH WATER TAKE-OFF AND CLIMB (ASES)

Note: If a rough water condition does not exist, the applicant shall be evaluated by simulating the TASK.

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to rough water take-off and climb.
(2) Positions the flight controls and flaps for the existing conditions.
(3) Clears the area; selects an appropriate take-off path considering wind, swells surface hazards and/or vessels.
(4) Retracts the water rudders as appropriate; advances the throttle smoothly to take-off power.

(5) Establishes and maintains an appropriate planing attitude, directional control, and corrects for porpoising, skipping, or excessive bouncing.
(6) Lifts off at minimum airspeed and accelerates to V_Y, ±5 knots before leaving ground effect.
(7) Retracts the landing gear, if appropriate, and flaps after a positive rate-of-climb is established.
(8) Maintains take-off power and V_Y ±5 knots to a safe manoeuvreing altitude.
(9) Maintains directional control and proper wind-drift correction throughout take-off and climb.
(10) Completes the appropriate checklist.

J. TASK: ROUGH WATER APPROACH AND LANDING (ASES)

Note: If a rough water condition does not exist, the applicant shall be evaluated by simulating the TASK.
References: POH/AFM
Objective: To determine that the applicant:
(1) Exhibits satisfactory knowledge of the elements related to rough water approach and landing.
(2) Adequately surveys the intended landing area.
(3) Considers the wind conditions, water, depth, hazards, surrounding terrain, and other watercraft.
(4) Selects the most suitable approach path, and touchdown area.
(5) Establishes the recommended approach and landing configuration and airspeed, and adjusts pitch attitude and power as required.
(6) Maintains a stabilised approach and the recommended approach airspeed, or in its absence not more than 1.3 V_{SO} ±5 knots with wind gust factor applied.
(7) Makes smooth, timely, and correct power and control application during the roundout and touch down.
(8) Contacts the water in the proper pitch attitude, and at the proper airspeed, considering the type of rough water.
(9) Maintains crosswind correction and directional control throughout the approach and landing sequence.
(10) Completes the appropriate checklist.

K. TASK: POWER-OFF 180° ACCURACY APPROACH AND LANDING (ASEL and ASES)

Objective: To determine that the applicant:
(1) Exhibits satisfactory knowledge of the elements related to a power-off 180° accuracy approach and landing.
(2) Considers the wind conditions, landing surface, obstructions, and selects an appropriate touchdown point.
(3) Positions aeroplane on downwind leg, parallel to landing runway, and not more than 1000 feet AGL.
(4) Completes final aeroplane configuration.
(5) Touches down in a normal landing attitude, at or within 200 feet (60 meters) beyond the specified touchdown point.
(6) Completes the appropriate checklist.

L. TASK: GO-AROUND/REJECTED LANDING (ASEL and ASES)

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to a go-around/rejected landing.
(2) Makes a timely decision to discontinue the approach to landing.
(3) Applies take-off power immediately and transitions to climb pitch attitude for VY, and maintains VY ±5 knots.
(4) Retracts flaps as appropriate.
(5) Retracts the landing gear if appropriate after a positive rate-of-climb is established.
(6) Manoeuvres to the side of runway/landing area to clear and avoid conflicting traffic.
(7) Maintains take-off power and VY ±5 knots to a safe manoeuvreing altitude.
(8) Maintains directional control and proper wind-drift correction throughout the climb.
(9) Completes the appropriate checklist.

V. AREA OF OPERATION: PERFORMANCE MANOEUVRES

Note: The examiner shall at least select either TASK A or B, and either C or D.

A. TASK: STEEP TURNS (ASEL and ASES)

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to steep turns.
(2) Establishes the manufacturers recommended airspeed or if one is not stated, a safe airspeed not to exceed VA.
(3) Rolls into a coordinated 360° steep turn with at least a 50° bank, followed by a 360° steep turn in the opposite direction.
(4) Divides attention between aeroplane control and orientation.
(5) Maintains the entry altitude, ±100 feet (30 meters), airspeed, ±10 knots, bank, ±5°; and rolls out on the entry heading, ±10°.

B. TASK: STEEP SPIRAL (ASEL and ASES)

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to a steep spiral.
(2) Selects an altitude sufficient to continue through a series of at least three 360° turns.
(3) Selects a suitable ground reference point.
(4) Applies wind-drift correction to track a constant radius circle around selected reference point with bank not to exceed 60° at steepest point in turn.
(5) Divides attention between aeroplane control and ground track, while maintaining coordinated flight.
(6) Maintains the specified airspeed, ±10 knots, rolls out towards object or specified heading, ±10°.

C. TASK: CHANDELLES (ASEL and ASES)

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to chandelles.
(2) Selects an altitude that will allow the manoeuvre to be performed no lower than 1,500 feet AGL (460 meters).
(3) Establishes the recommended entry configuration, power, and airspeed.
(4) Establishes the angle of bank at approximately 30°.

(5) Simultaneously applies power and pitch to maintain a smooth, coordinated climbing turn to the 90° point, with a constant bank.
(6) Begins a coordinated constant rate rollout from the 90° point to the 180° point maintaining power and a constant pitch attitude.
(7) Completes rollout at the 180° point, ±10° just above a stall airspeed, and maintaining that airspeed momentarily avoiding a stall.
(8) Resumes straight and level flight with minimum loss of altitude.

D. TASK: LAZY EIGHTS (ASEL and ASES)

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to lazy eights.
(2) Selects an altitude that will allow the TASK to be performed no lower than 1,500 feet AGL (460 meters).
(3) Establishes the recommended entry configuration, power, and airspeed.
(4) Maintains coordinated flight throughout the manoeuvre.
(5) Achieves the following throughout the manoeuvre:
  (a) Approximately 30° bank at the steepest point
  (b) Constant change of pitch and roll rate
  (c) Altitude tolerance at 180° points, ±100 feet (30 meters) from entry altitude
  (d) Airspeed tolerance at the 180° point plus ±10° knots from entry airspeed
  (e) Heading tolerance at the 180° point ±10°
(6) Continues the manoeuvre through the number of symmetrical loops specified and resumes straight and level flight.

VI. AREA OF OPERATION: GROUND REFERENCE MANOEUVRE

A. TASK: EIGHTS ON PYLONS (ASEL and ASES)

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to eights on pylons.
(2) Determines the approximate pivotal altitude.
(3) Selects suitable pylons, that will permit straight and level flight, between the pylons.
(4) Enters the manoeuvre at the appropriate altitude and airspeed and at a bank angle of approximately 30° to 40° at the steepest point.
(5) Applies the necessary corrections so that the line-of-sight reference line remains on the pylon.
(6) Divides attention between accurate coordinated aeroplane control and outside visual references.
(7) Holds pylon using appropriate pivotal altitude avoiding slips and skids.

VII. AREA OF OPERATION: NAVIGATION

A. TASK: PILOTAGE AND DEAD RECKONING (ASEL and ASES)

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to pilotage and dead reckoning.
(2) Follows the preplanned course by reference to landmarks.
(3) Identifies landmarks by relating surface features to chart symbols.
(4) Navigates by means of precomputed headings, groundspeed, and elapsed time.
(5) Demonstrates the use of magnetic compass in navigation, to include turns to new headings.

(6) Corrects for and records differences between pre-flight groundspeed and heading calculations and those determined en route.
(7) Verifies the aeroplane position within two (2) nautical miles of flight planned route.
(8) Arrives at the en route checkpoints within three (3) minutes of the initial or revised ETA and provides a destination estimate.
(9) Maintains appropriate altitude, ±100 feet (30 meters), and headings, ±10°.

B. TASK: NAVIGATION SYSTEMS AND RADAR SERVICES (ASEL and ASES)

Objective: To determine that the applicant:
(1) Exhibits satisfactory knowledge of the elements related to navigation systems and radar services.
(2) Demonstrates the ability to use an airborne electronic navigation system.
(3) Locates the aeroplane position using the navigation system.
(4) Intercepts and tracks a given course, radial, or bearing as appropriate.
(5) Recognises and describes the indication of station passage if appropriate.
(6) Recognises signal loss and takes appropriate action.
(7) Uses proper communication procedures when utilising radar services.
(8) Maintains the appropriate altitude, ±100 feet (30 meters) and heading, ±10°.

C. TASK: DIVERSION (ASEL and ASES)

Objective: To determine that the applicant:
(1) Exhibits satisfactory knowledge of the elements related to diversion.
(2) Selects an appropriate alternate aerodrome and route.
(3) Makes an accurate estimate of heading, groundspeed, arrival time, and fuel consumption to the alternate aerodrome.
(4) Maintains the appropriate altitude, ±100 feet (30 meters), and heading, ±10°.

D. TASK: LOST PROCEDURES (ASEL and ASES)

Objective: To determine that the applicant:
(1) Exhibits satisfactory knowledge of the elements related to lost procedures.
(2) Selects an appropriate course of action.
(3) Maintains an appropriate heading and climbs, if necessary.
(4) Identifies prominent landmarks.
(5) Uses navigation systems/facilities and/or contacts an ATC facility for assistance as appropriate.

VIII. AREA OF OPERATION: SLOW FLIGHT AND STALLS

A. TASK: MANOEUVREING DURING SLOW FLIGHT (ASEL and ASES)

Note: All stalls for the Commercial Licence will be taken to the "onset" (buffeting) stall condition.

References: POH/AFM

Objective: To determine that the applicant:
(1) Exhibits satisfactory knowledge of the elements related to manoeuvreing during slow flight.
(2) Selects an entry altitude that will allow the TASK to be completed no lower than 1,500 feet (460 meters) AGL.

(3) Establishes and maintains an airspeed at which any further increase in angle of attack, increase in load factor, or reduction in power, would result in an immediate stall.
(4) Accomplishes coordinated straight and level flight, turns, climbs, and descents with landing gear and flap configurations specified by the examiner.
(5) Divides attention between aeroplane control and orientation.
(6) Maintains the specified altitude, ±50 feet (15 meters); specified heading, ±10°; airspeed +5/-0 knots, and specified angle of bank, ± 5°.

B. TASK: POWER-OFF STALLS (ASEL and ASES)

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to power-off stalls.
(2) Selects an entry altitude that allows the TASK to be completed no lower than 1,500 feet (460 meters) AGL.
(3) Establishes a stabilised descent in the approach or landing configuration, as specified by the examiner.
(4) Transitions smoothly from the approach or landing attitude to a pitch attitude that will induce a stall.
(5) Maintains a specified heading, ±10° in straight flight; maintains a specified angle of bank, not to exceed 20°, ±5°, in turning flight while inducing the stall.
(6) Recognises and recovers promptly as the stall occurs by simultaneously reducing the angle of attack, increasing power to maximum allowable, and leveling the wings to return to a straight and level flight attitude with a minimum loss of altitude appropriate for the aeroplane.

Note: Evaluation criteria for a recovery form an approach to stall should not mandate maintaining altitude during recovery. Proper evaluation criteria should consider the multitude of external and internal variables which affect the recovery altitude.

(7) Retracts the flaps to the recommended setting, retracts the landing gear if retractable after a positive rate-of-climb is established.
(8) Accelerates to V_X or V_Y speed before the final flap retraction; returns to the altitude, heading, and airspeed specified by the examiner.

C. TASK: POWER-ON STALLS (ASEL and ASES)

Note: In some high performance aeroplanes, the power setting may have to be reduced below the skill test standards guideline power setting to prevent excessively high pitch attitudes (greater than 30° nose up).

References: POH/AFM

Note: In some high performance aeroplanes, the power setting may have to be reduced below the skill test standards guideline power setting to prevent excessively high pitch attitudes (greater than 30° nose up).

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to power-on stalls.
(2) Selects an entry altitude that allows the TASK to be completed no lower than 1,500 feet (460 meters) AGL.
(3) Establishes the take-off or departure configuration. Sets power to no less than 65 percent available power.
(4) Transitions smoothly from the take-off or departure attitude to a pitch attitude that will induce a stall.

(5) Maintains a specified heading ±5°, in straight flight; maintains a specified angle of bank, not to exceed a 20°, ±10°, in turning flight, while inducing the stall.

(6) Recognises and recovers promptly as the stall occurs by simultaneously reducing the angle of attack, increasing power to maximum allowable, and leveling the wings to return to a straight and level flight attitude, with a minimum loss of altitude appropriate for the aeroplane.

Note: Evaluation criteria for a recovery form an approach to stall should not mandate a predetermined value for altitude loss and should not mandate maintaining altitude during recovery. Proper evaluation criteria should consider the multitude of external and internal variables which affect the recovery altitude.

(7) Retracts flaps to the recommended setting, retracts the landing gear if retractable, after a positive rate-of-climb is established.

(8) Accelerates to VX or VY speed before the final flap retraction; returns to the altitude, heading, and airspeed specified by the examiner.

D. TASK: ACCELERATED STALLS (ASEL and ASES)

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to accelerated (power-on or power off) stalls.

(2) Selects an entry altitude that allows the TASK to be completed no lower than 3,000 feet AGL.

(3) Establishes the aeroplane in a steady flight condition, airspeed below VA, 20 knots above unaccelerated stall speed or the manufacturer recommendations.

(4) Transitions smoothly from the cruise attitude to the angle of bank of approximately 45°that will induce a stall.

(5) Maintains coordinated turning flight, increasing elevator back pressure steadily and firmly to induce the stall.

(6) Recognises and recovers promptly as the "onset" (buffeting) stall condition.

(7) Returns to the altitude, heading, and airspeed specified by the examiner.

E. TASK: SPIN AWARENESS (ASEL and ASES)

References: POH/AFM

Objective: To determine that the applicant exhibits satisfactory knowledge of the elements related to spin awareness by explaining:

(1) Aerodynamic factors related to spins.

(2) Flight situations where unintentional spins may occur.

(3) Procedures for recovery from unintentional spins.

IX. AREA OF OPERATION: EMERGENCY OPERATIONS

A. TASK: EMERGENCY DESCENT (ASEL and ASES)

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to an emergency descent.

(2) Recognises situations, such as depressurisation, cockpit smoke, and/or file that require an emergency descent.

(3) Establishes the appropriate airspeed, ±10 knots, and configuration for the emergency descent.

(4) Exhibits orientation, division of attention, and proper planning.

(5) Maintains positive load factors during the descent.

(6) Maintains appropriate airspeed, +0/-10 knots, and levels off at specified altitude, ±100 feet.
(7) Completes appropriate checklists.

B. TASK: EMERGENCY APPROACH AND LANDING (SIMULATED) (ASEL and ASES)

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to emergency approach and landing procedures.
(2) Analyses the situation and selects an appropriate course of action.
(3) Establishes and maintains the recommended best glide airspeed, ±10 knots.
(4) Selects a suitable landing area.
(5) Plans and follows a flight pattern to the selected landing area considering altitude, wind, terrain, and obstructions.
(6) Prepares for landing, or go-around, as specified by the examiner.
(7) Follows the appropriate checklist.

C. TASK: SYSTEMS AND EQUIPMENT MALFUNCTIONS (ASEL and ASES)

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to systems and equipment malfunctions appropriate to the aeroplane provided for the skill test.
(2) Analyses the situation and takes appropriate action for simulated emergencies appropriate to the aeroplane provided for the skill test for at least five (5) of the following:
   (a) Partial or complete power loss
   (b) Engine roughness or overheat
   (c) Carburetor or induction icing
   (d) Loss of oil pressure
   (e) Fuel starvation
   (f) Electrical malfunction
   (g) Vacuum/pressure, and associated flight instruments malfunction
   (h) Pitot/static
   (i) Landing gear or flap malfunction
   (j) Inoperative trim
   (k) Inadvertant door or window opening
   (l) Structural icing
   (m) Smoke/fire/engine compartment fire
   (n) Any other emergency appropriate to the aeroplane
(3) Follows the appropriate checklist or procedure.

D. TASK: EMERGENCY EQUIPMENT AND SURVIVAL GEAR (ASEL and ASES)

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to emergency equipment and survival gear appropriate to the aeroplane and environment encountered during flight. Identifies appropriate equipment that should be aboard the aeroplane.

X. AREA OF OPERATION: HIGH-ALTITUDE OPERATIONS

A. TASK: SUPPLEMENTAL OXYGEN (ASEL and ASES)

References: SLCAR Part 6, POH/AFM

Objective: To determine that the applicant exhibits satisfactory knowledge of the elements related to supplemental oxygen by explaining:

(1) Supplemental oxygen requirements for flight crew and passengers when operating nonpressurised aeroplanes.

(2) Identification and differences between "aviators' breathing oxygen" and other types.

(3) Operational characteristics of continuous flow, demand, and pressure-demand oxygen systems.

B. TASK: PRESSURISATION (ASEL and ASES)

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to pressurisation by explaining:

(a) Fundamental concept of cabin pressurisation.

(b) Supplemental oxygen requirements when operating aeroplanes with pressurised cabins.

(c) Physiological hazards associated with high-altitude flight and decompression.

Note: Element 2 applies only if the aeroplane provided for the skill test is equipped for pressurised flight operations.

(2) Operates the pressurisation system properly, and reacts appropriately to simulated pressurisation malfunctions.

XI. AREA OF OPERATION: POST-FLIGHT PROCEDURES

Note: The examiner shall select TASK A and for ASES applicants at least one other TASK.

A. TASK: AFTER LANDING, PARKING, AND SECURING (ASEL and ASES)

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to after landing, parking and securing procedures.

(2) Maintains directional control after touchdown while decelerating to an appropriate speed.

(3) Observes runway hold lines and other surface control markings and lighting.

(4) Parks in an appropriate area, considering the safety of nearby persons and property.

(5) Follows the appropriate procedure for engine shutdown.

(6) Completes the appropriate checklist.

(7) Conducts an appropriate post-flight inspection and secures the aircraft.

B. TASK: ANCHORING (ASES)

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to anchoring.

(2) Selects a suitable area for anchoring, considering seaplane movement, water depth, tide, wind, and weather changes.

(3) Uses an adequate number of anchors and lines of sufficient strength and length to ensure the seaplane security.

C. TASK: DOCKING AND MOORING (ASES)

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to docking and mooring.

(2) Approaches the dock or mooring buoy in the proper direction considering speed, hazards, wind, and water current.

(3) Ensures seaplane security.

D. TASK: RAMPING/BEACHING (ASES)

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to ramping/beaching.

(2) Approaches the ramp/beach considering persons and property, in the proper attitude and direction, at a safe speed, considering water depth, tide, current and wind.

(3) Ramps/beaches and secures the seaplane in a manner that will protect it from the harmful effect of wind, waves, and changes in water level.

SECTION THREE: COMMERCIAL PILOT LICENCE – AEROPLANE MULTI-ENGINE SKILL TEST STANDARDS

1.1 APPLICANT'S SKILL TEST CHECKLIST APPOINTMENT WITH EXAMINER

EXAMINER'S NAME:

LOCATION:_____

DATE/TIME:_____

ACCEPTABLE AIRCRAFT

Aircraft Documents

Airworthiness Certificate

Registration Certificate

Operating Limitations

Aircraft Maintenance Records

Logbook Record of Airworthiness Inspections and AD Compliance

Pilot's Operating Handbook

SLCAA-Approved Aircraft Flight Manual

PERSONAL EQUIPMENT

Current Aeronautical Charts

Computer and Plotter

Flight Plan Forms

Flight Logs

Current Aeronautical Information Publication (AIP), Airport Facility Directory, and Appropriate Publications

View-Limiting Device if Applicable

PERSONAL RECORDS

Identification (Government Issue ID with Photo/Signature, Date of Birth, Actual Residential Address)

Personnel Licence if applicable

Current and Appropriate Medical Certificate

Completed Application Form (for a Licence and/or Rating with Instructor's Signature If applicable)

Computer Test Report

Knowledge Test Report if applicable

Logbook with appropriate Instructor Endorsements

Notice of Discontinuance if applicable

Notice of Disapproval (if applicable)

Approved Training Organisation Certificate (if applicable)

Certificate of Language Proficiency (From Language Learning or Testing Centre) if applicable

Radiotelephony Licence if applicable

Examiner's Fee (if applicable)

1.2 EXAMINER'S SKILL TEST CHECKLIST
Multi Engine Land (MEL)
Multi-Engine Sea (MES

APPLICANT'S NAME:_____
LOCATION:_____
DATE/TIME:_____

Note: The flight instruction and skill test for CPL (A) shall include CRM

I. PREFLIGHT PREPARATION

- **A.** Certificates and Documents
- **B.** Airworthiness Requirements (AMEL and AMES)
- **C.** Weather Information (AMEL and AMES)
- **D.** Cross-Country Flight Planning (AMEL and AMES)
- **E.** National Airspace System (AMEL and AMES)
- **F.** Performance and Limitations (AMEL and AMES)
- **G.** Operation of Systems (AMEL and AMES)
- **H.** Principles of Flight—Engine Inoperative (AMEL and AMES)
- **I.** Water and Seaplane Characteristics (AMES)
- **J.** Seaplane Bases, Maritime Rules, and Aids to Marine Navigation (AMES)
- **K.** Aeromedical Factors (AMEL and AMES)

II. PREFLIGHT PROCEDURES

- **A.** Preflight Inspection (AMEL and AMES)
- **B.** Cockpit Management (AMEL and AMES)
- **C.** Engine Starting (AMEL and AMES)
- **D.** Taxiing (AMEL)
- **E.** Taxiing and Sailing (AMES)
- **F.** Before Takeoff Check (AMEL and AMES)

III. AIRPORT AND SEAPLANE BASE OPERATIONS

- **A.** Radio Communications and ATC Light Signals (AMEL and AMES)
- **B.** Traffic Patterns (AMEL and AMES)
- **C.** Airport/Seaplane Base, Runway, and Taxiway Signs, Markings, and Lighting (AMEL and AMES)

IV. TAKEOFFS, LANDINGS, AND GO-AROUNDS

- **A.** Normal and Crosswind Takeoff and Climb (AMEL and AMES)
- **B.** Normal and Crosswind Approach and Landing (AMEL and AMES)
- **C.** Short-Field Takeoff (Confined Area—AMEL) and Maximum Performance Climb (AMEL and AMES)
- **D.** Short-Field (Confined Area—AMES) Approach
- **E.** Glassy Water Takeoff and Climb (AMES)
- **F.** Glassy Water Approach and Landing (AMES)

- **G.** Rough Water Takeoff and Climb (AMES)
- **H.** Rough Water Approach and Landing (AMES
- **I.** Go-Around/Rejected Landing (AMEL and AMES)

V. PERFORMANCE MANEUVER

- **A.** Steep Turns (AMEL and AMES)

VI. NAVIGATION

- **A.** Pilotage and Dead Reckoning (AMEL and AMES)
- **B.** Navigation Systems and Radar Services (AMEL and AMES)
- **C.** Diversion (AMEL and AMES)
- **D.** Lost Procedures (AMEL and AMES)

VII. SLOW FLIGHT AND STALLS

- **A.** Maneuvering During Slow Flight (AMEL and AMES)
- **B.** Power-Off Stalls (AMEL and AMES)
- **C.** Power-On Stalls (AMEL and AMES)
- **D.** Spin Awareness (AMEL and AMES)

VIII. EMERGENCY OPERATIONS

- **A.** Emergency Descent (AMEL and AMES)
- **B.** Engine Failure During Takeoff Before V_{MC} (Simulated) (AMEL and AMES)
- **C.** Engine Failure After Lift-Off (Simulated) (AMEL and AMES)
- **D.** Approach and Landing with an Inoperative Engine (Simulated) (AMEL and AMES)
- **E.** Systems and Equipment Malfunctions (AMEL and AMES)
- **F.** Emergency Equipment and Survival Gear (AMEL and AMES)

IX. HIGH ALTITUDE OPERATIONS

- **A.** Supplemental Oxygen (AMEL and AMES)
- **B.** Pressurization (AMEL and AMES)

X. MULTIENGINE OPERATIONS

- **A.** Maneuvering with One Engine Inoperative (AMEL and AMES)
- **B.** Vmc Demonstration (AMEL and AMES)
- **C.** Engine Failure During Flight (by Reference to Instruments) (AMEL and AMES)
- **D.** Instrument Approach—One Engine Inoperative (by Reference to Instruments) (AMEL and AMES)

XI. POSTFLIGHT PROCEDURES

- **A.** After Landing, Parking, and Securing (AMEL and AMES)
- **B.** Anchoring (AMES)
- **C.** Docking and Mooring (AMES)
- **D.** Ramping/Beaching (AMES)

1.3 AREAS OF OPERATION

I. AREA OF OPERATION: PRE-FLIGHT PREPARATION

Note: The examiner shall develop a scenario based on real time weather to evaluate TASKs C and D.

A. TASK: CERTIFICATES AND DOCUMENTS (AMEL and AMES)

References: SLCAR Parts 1A, 6 and 8, POH/AFM

Objective: To determine that the applicant exhibits satisfactory knowledge of the elements related to certificates and documents by:

(1) Explaining:
- (a) Commercial pilot licence privileges limitations and recent flight experience requirements
- (b) Medical certificate class and duration
- (c) Pilot logbook or flight records

(2) Locating and explaining
- (a) Airworthiness and registration certificates
- (b) Operating limitations, placards, instrument markings, and POH/AFM
- (c) Weight and balance data and equipment list

B. TASK: AIRWORTHINESS REQUIREMENTS (AMEL and AMES)

References: SLCAR Part 6

Objective: To determine that the applicant exhibits satisfactory knowledge of the elements related to airworthiness requirements by:

(1) Explaining:
- (a) Required instruments and equipment for day/night VFR.
- (b) Procedures and limitations for determining airworthiness of the aeroplane with inoperative instruments and equipment with and without an MEL.
- (c) Requirements and procedures for obtaining a special flight permit.

(2) Locating and explaining:
- (a) Airworthiness directives
- (b) Compliance records
- (c) Maintenance/inspection requirements
- (d) Appropriate record keeping

C TASK: WEATHER INFORMATION (AMEL and AMES)

References: SLCAR Part 6

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to weather information by analysing weather reports, charts, and forecasts from various sources with emphasis on:
- (a) METAR, TAF, and FA
- (b) Surface analysis chart
- (c) Radar summary chart
- (d) Winds and temperature aloft chart
- (e) Significant weather prognostic charts
- (f) Convective outlook chart
- (g) AWOS, ASOS, and ATIS reports
- (h) SIGMETs and AIRMETs
- (i) PIREPs
- (j) Windshear reports

(k) Icing and freezing level information

(2) Makes a competent "go/no-go" decision based on available weather information.

D. TASK: CROSS-COUNTRY FLIGHT PLANNING (AMEL and AMES)

References: SLCAR Part 6

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to cross-country flight planning by presenting and explaining a pre-planned VFR cross-country flight, as previously assigned by the examiner. On the day of the skill test, the final flight plan shall be to the first fuel stop, based on maximum allowable passengers, baggage and/or cargo loads using real time weather.

(2) Uses appropriate and current aeronautical charts.

(3) Properly identifies airspace, obstructions, and terrain features.

(4) Selects easily identifiable en route checkpoints.

(5) Selects most favourable altitudes considering weather conditions and equipment capabilities.

(6) Computes headings, flight time, and fuel requirements.

(7) Selects appropriate navigation system/facilities and communication frequencies.

(8) Applies pertinent information from NOTAMs, A/FD, and other flight publications.

(9) Completes a navigation log and simulates filing a VFR flight plan.

E. TASK: NATIONAL AIRSPACE SYSTEM (AMEL and AMES)

References: SLCAR Part 6

Objective: To determine that the applicant exhibits satisfactory knowledge of the elements related to the National Airspace System by explaining:

(1) Basic VFR weather minimums – for all classes of airspace.

(2) Airspace classes – their operating rules, pilot certification, and aeroplane equipment requirements for the following:

(a) Class A

(b) Class B

(c) Class C

(d) Class D

(e) Class E

(f) Class G

(3) Special use and other airspace areas.

F. TASK: PERFORMANCE AND LIMITATIONS (AMEL and AMES)

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to performance and limitations by explaining the use of charts, tables, and data to determine performance and the adverse effects of exceeding limitations.

(2) Computes weight and balance. Determines if the computed weight and centre of gravity is within the aeroplanes operating limitations and if the weight and centre of gravity will remain within limits during all phases of flight.

(3) Demonstrates use of the appropriate performance charts, tables, and data.

(4) Describes the effects of atmospheric conditions on the aeroplanes performance.

G. TASK: OPERATION OF SYSTEMS (AMEL and AMES)

References: POH/AFM
Objective: To determine that the applicant exhibits satisfactory knowledge of the elements related to the operation of systems on the aeroplane provided for the skill test, by explaining at least five (5) of the following systems:

(1) Primary flight controls and trim
(2) Flaps, leading edge devices, and spoilers
(3) Water rudders (ASES)
(4) Powerplant and propeller
(5) Landing gear
(6) Fuel, oil, and hydraulic
(7) Electrical
(8) Avionics
(9) Pitot-static, vacuum/pressure and associated flight instruments
(10) Environmental
(11) De-icing and anti-icing

H. TASK: PRINCIPLES OF FLIGHT – ENGINE INOPERATIVE (AMEL and AMES)

References: POH/AFM
Objective: To determine that the applicant exhibits satisfactory knowledge of the elements related to engine inoperative principles of flight by explaining the:

(1) Meaning of the term "critical engine."
(2) Effects of density altitude on the V_{MC} demonstration.
(3) Effects of aeroplane weight and centre of gravity on control.
(4) Effects of angle of bank on V_{MC}.
(5) Relationship of V_{MC} to stall speed.
(6) Reasons for loss of directional control.
(7) Indications of loss of directional control.
(8) Importance of maintaining the proper pitch and bank attitude, and the proper coordination of controls.
(9) Loss of directional control recovery procedure.
(10) Engine failure during take-off including planning, decisions, and single-engine operations.

I. TASK: WATER AND SEAPLANE CHARACTERISTICS (AMES)

Objective: To determine that the applicant exhibits satisfactory knowledge of the elements related to water and seaplane characteristics by explaining:

(1) The characteristics of a water surface as affected by features, such as:
  (a) Size and location
  (b) Protected and unprotected areas
  (c) Surface wind
  (d) Direction and strength of water current
  (e) Floating and partially submerged debris
  (f) Sandbars, islands, and shoals
  (g) Vessel traffic and wakes
  (h) Other features peculiar to the area
(2) Float and hull construction, and their effect on seaplane performance.
(3) Causes of porpoising and skipping, and the pilot action required to prevent or correct these occurrences.

J. TASK: SEAPLANE BASES, MARITIME RULES, AND AIDS TO MARINE NAVIGATION (AMES)

References: POH/AFM

Objective: To determine that the applicant exhibits satisfactory knowledge of the elements related to seaplane bases, maritime rules, and aids to marine navigation by explaining:

(1) How to locate and identify seaplane bases on charts or in directories.
(2) Operating restrictions at various bases.
(3) Right-of-way, steering, and sailing rules pertinent to seaplane operation.
(4) Marine navigation aids, such as buoys, beacons, lights, and sound signals.

K. TASK: AEROMEDICAL FACTORS (AMEL and AMES)

Objective: To determine that the applicant exhibits satisfactory knowledge of the elements related to aeromedical factors by explaining:

(1) The symptoms, causes, effects, and corrective actions of at least four (4) of the following:
  (a) Hypoxia
  (b) Hyperventilation
  (c) Middle ear and sinus problems
  (d) Spatial disorientation
  (e) Motion sickness
  (f) Carbon monoxide poisoning
  (g) Stress and fatigue
  (h) Dehydration
(2) The effects of alcohol, drugs, and over-the-counter medications.
(3) The effects of excess nitrogen during scuba dives upon a pilot or passenger in-flight.

II. AREA OF OPERATION: PRE-FLIGHT PROCEDURES

A. TASK: PRE-FLIGHT INSPECTION (AMEL and AMES)

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to pre-flight inspection. This shall include which items must be inspected, the reasons for checking each item, and how to detect possible defects.
(2) Inspects the aeroplane with reference to an appropriate checklist.
(3) Verifies that the aeroplane is in condition for safe flight.

B. TASK: COCKPIT MANAGEMENT (AMEL and AMES)

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to cockpit management procedures.
(2) Ensures all loose items in the cockpit and cabin are secured.
(3) Organises material and equipment in an efficient manner so they are readily available.
(4) Briefs occupants on the use of safety belts, shoulder harnesses, doors, and emergency procedures.

C. TASK: ENGINE STARTING (AMEL and AMES)

References: POH/AFM
Objective: To determine that the applicant:
(1) Exhibits satisfactory knowledge of the elements related to recommended engine starting procedures. This shall include the use of an external power source, and starting under various atmospheric conditions.
(2) Positions the aeroplane properly considering structures, surface conditions, other aircraft, and the safety of nearby persons and property.
(3) Utilises the appropriate checklist for starting procedure.

D. TASK: TAXIING (AMEL)
References: POH/AFM
Objective: To determine that the applicant:
(1) Exhibits satisfactory knowledge of the elements related to safe taxi procedures.
(2) Performs a brake check immediately after the aeroplane begins moving.
(3) Positions flight controls properly for the existing wind conditions.
(4) Controls direction and speed without excessive use of brakes.
(5) Exhibits procedures for steering, manoeuvring, maintaining taxiway, runway position, and situational awareness to avoid runway incursions.
(6) Exhibits proper positioning of the aircraft relative to hold lines.
(7) Exhibits procedures to insure clearances/instructions are received and recorded/read back correctly.
(8) Exhibits situational awareness/taxi procedures in the event the aircraft is on a taxiway that is between parallel runways.
(9) Uses a taxi chart during taxi.
(10) Complies with aerodrome/taxiway markings, signals, ATC clearances, and instructions.
(11) Utilises procedures for eliminating pilot distractions.
(12) Taxies so as to avoid other aircraft and hazards.

E. TASK: TAXIING AND SAILING (AMES)
References: POH/AFM
Objective: To determine that the applicant:
(1) Exhibits satisfactory knowledge of the elements related to water taxi and sailing procedures.
(2) Positions the flight controls properly for the existing wind conditions.
(3) Plans and follows the most favourable course while taxi or sailing considering wind, water current, water conditions and maritime regulations.
(4) Uses the appropriate idle, plow, or step taxi technique.
(5) Uses flight controls, flaps, doors, water rudder, and power correctly so as to follow the desired course while sailing.
(6) Prevents and corrects for porpoising and skipping.
(7) Avoids other aircraft, vessels, and hazards.
(8) Complies with seaplane base signs, signals, and clearances.

F. TASK: RUNWAY INCURSION AVOIDANCE (AMEL and AMES)
References: POH; AFM
Objective: To determine that the applicant exhibits satisfactory knowledge of the elements of runway incursion avoidance by:
(1) Exhibiting distinct challenges and requirements during taxi operations not found in other phases of flight operations.

(2) Exhibiting procedures for appropriate cockpit activities during taxiing including taxi route planning, briefing the location of HOT SPOTS, communicating and coordinating with ATC.
(3) Exhibiting procedures for steering, manoeuvring, maintaining taxiway, runway position, and situational awareness.
(4) Knowing the relevance/importance of hold lines.
(5) Exhibiting procedures to ensure the pilot maintains strict focus to the movement of the aircraft and ATC communications, including the elimination of all distractive activities (i.e. cell phone, texting, conversations with passengers) during taxi operations.
(6) Utilising procedures for holding the pilot's workload to a minimum during taxi operations.
(7) Utilising taxi operation planning procedures, such as recording taxi instructions, reading back taxi clearances, and reviewing taxi routes on the aerodrome diagram.
(8) Utilising procedures to insure that clearance or instructions that are actually received a re adhered to rather than the ones expected to be received.
(9) Utilising procedures to maintain/enhance situational awareness when conducting taxi operations in relation to other aircraft operations in the vicinity, as well as to other vehicles moving on the aerodrome.
(10) Exhibiting procedures for briefing if a landing rollout to a taxiway exit will place the pilot in close proximity to another runway which can result in a runway incursion.
(11) Conducting appropriate after landing/taxi procedures in the event the aircraft is on a taxiway that is between parallel runways.
(12) Knowing specific procedures for operations at an aerodrome with an operating air traffic control tower, with emphasis on ATC communications and runway entry/crossing authorisations.
(13) Utilising ATC communications and pilot actions before take-off, before landing, and after landing at towered and non-towered aerodromes.
(14) Knowing procedures unique to night operations.
(15) Knowing operations at non-towered aerodromes.
(16) Knowing the use of aircraft exterior lighting.
(17) Knowing the hazards of low visibility operations.

G. TASK: BEFORE TAKE-OFF CHECK (AMEL and AMES)
References: POH/AFM
Objective: To determine that the applicant:
(1) Exhibits satisfactory knowledge of the elements related to the before take-off check. This shall include the reasons for checking each item and how to detect malfunctions.
(2) Positions the aeroplane properly considering other aircraft/vessels, wind and surface conditions.
(3) Divides attention inside and outside the cockpit.
(4) Ensures the engine temperatures and pressure are suitable for run-up and take-off.
(5) Accomplishes the before take-off checklist and ensures the aeroplane is in safe operating condition.
(6) Reviews take-off performance airspeeds, take-off distances, departures and emergency procedures.
(7) Avoids runway incursion and/or ensures no conflict with traffic prior to taxiing into take-off position.

III. AREA OF OPERATION: AERODROME AND SEAPLANE BASE OPERATIONS

A. TASK: RADIO COMMUNICATIONS AND ATC LIGHT SIGNALS (AMEL and AMES)

References: SLCAR Part 6

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to radio communications and ATC light signals.
(2) Selects appropriate frequencies.
(3) Transmits using recommended phraseology.
(4) Acknowledges radio communications and complies with instructions.

B. TASK: TRAFFIC PATTERNS (AMEL and AMES)

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to traffic patterns. This shall include procedures at aerodromes with and without operating control towers, prevention of runway incursions, collision avoidance, wake turbulence avoidance, and wind shear.
(2) Complies with proper traffic pattern procedures.
(3) Maintains proper spacing from other aircraft.
(4) Corrects for wind-drift to maintain proper ground track.
(5) Maintains orientation with runway/landing area in use.
(6) Maintains traffic pattern altitude ±100 feet (30 meters), and appropriate airspeed ±10 knots.

C. TASK: AERODROME/SEAPLANE BASE, RUNWAY AND TAXIWAY SIGNS, MARKINGS AND LIGHTING (AMEL and AMES)

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to aerodrome/seaplane base, runway, and taxiway operations with emphasis on runway incursion avoidance.
(2) Properly identifies and interprets aerodrome/seaplane base, runway, and taxiway signs, markings, and lighting.

IV. AREA OF OPERATION: TAKE-OFFS, LANDINGS, AND GO-AROUNDS

A. TASK: NORMAL AND CROSSWIND TAKE-OFF AND CLIMB (AMEL and AMES)

Note: If a crosswind condition does not exist, the applicants knowledge of crosswind elements shall be evaluated through oral testing.

References: POH/AFM

Objective: To determine that the applicant:

(1) Utilises procedures before taxiing onto the runway or take-off area to ensure runway incursion avoidance. Verify ATC clearance/no aircraft on final at non-towered aerodromes before entering the runway, and ensure that the aircraft is on the correct take-off runway.
(2) Exhibits satisfactory knowledge of the elements related to normal and crosswind take-off, climb operations, and rejected take-off procedures.
(3) Ascertains wind direction with or without visible wind direction indicators.
(4) Calculates/determines if crosswind component is above his or her ability or that of the aircraft capability.
(5) Positions the flight controls for the existing wind conditions.

(6) Clears the area, taxies onto the take-off surface and aligns the aeroplane on the runway centre/take-off path.
(7) Retracts the water rudders as appropriate, (AMES) advances the throttles smoothly to take-off power.
(8) Establishes and maintains the most efficient planing/lift-off attitude and corrects for porpoising and skipping (AMES).
(9) Rotates and lifts off at the recommended airspeed and accelerates to VY.
(10) Establishes a pitch attitude that will maintain VY ±5 knots.
(11) Retracts the landing gear, if appropriate, and flaps after a positive rate-of-climb is established.
(12) Maintains take-off power and VY ±5 knots to a safe manoeuvreing altitude.
(13) Maintains directional control, proper wind-drift correction throughout the take-off and climb.
(14) Complies with noise abatement procedures.
(15) Completes appropriate checklists.

B. TASK: NORMAL AND CROSSWIND APPROACH AND LANDING (AMEL and AMES)

Note: If a crosswind condition does not exist, the applicants knowledge of the crosswind elements shall be evaluated through oral testing.

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to normal and crosswind approach and landing with emphasis on proper use and coordination of flight controls.
(2) Adequately surveys the intended landing area (AMES).
(3) Considers the wind conditions, landing surface, obstructions, and selects a suitable touchdown point.
(4) Establishes the recommended approach and landing configuration and airspeed and adjusts pitch attitude and power as required.
(5) Maintains a stabilised approach and recommended airspeed, or in its absence, not more than 1.3 VSO, ±5 knots, with wind gust factor applied.
(6) Makes smooth, timely, and correct control application during the roundout and touchdown.
(7) Contacts the water at the proper pitch attitude (AMES).
(8) Touches down smoothly at approximate stalling speed (AMEL).
(9) Touches down at or within 200 feet (60 meters) beyond a specified point, with no drift, and with the aeroplanes longitudinal axis aligned with and over the runway centre/landing path.
(10) Maintains crosswind correction and directional control throughout the approach and landing sequence.
(11) Executes a timely go-around decision when the approach cannot be made within the tolerances listed above.
(12) Utilises after landing runway incursion avoidance procedures.
(13) Completes appropriate checklist.

C. TASK: SHORT-FIELD TAKE-OFF (CONFINED AREA – AMEL) AND MAXIMUM PREFORMANCE CLIMB (AMEL and AMES)

References: POH/AFM

Objective: To determine that the applicant:

(1) Utilises procedures before taxiing onto the runway or take-off area to ensure runway incursion avoidance. Verify ATC clearance/no aircraft on final at non0-towered aerodromes before entering the runway, and ensure that the aircraft is on the correct take-off runway.
(2) Exhibits satisfactory knowledge of the elements related to a short-field confined area (AMES) take-off and maximum performance climb.
(3) Positions the flight controls for the existing wind conditions, sets flaps as recommended.
(4) Clears the area; taxies into take-off position utilising maximum available take-off area and aligns the aeroplane on the runway centre/take-off path.
(5) Selects an appropriate take-off path for the existing conditions (AMES).
(6) Applies brakes (if appropriate) while advancing the throttles smoothly to take-off power.
(7) Establishes and maintains the most efficient planing/lift-off attitude and corrects for porpoising and skipping (AMES).
(8) Lifts off at the recommended airspeed, and accelerates to recommended obstacle clearance airspeed, or VX.
(9) Establishes a pitch attitude that will maintain the recommended obstacle clearance airspeed, or VX, +5/-0 knots, until the obstacle is cleared, or until the aeroplane is 50 feet (20 meters) above the surface.
(10) After clearing the obstacle, establishes the pitch attitude for VY, accelerates to VY, and maintains VY, ±5 knots, during the climb.
(11) Retracts the landing gear, if appropriate, and flaps after clear of any obstacles or as recommended by manufacturer.
(12) Maintains take-off power and VY ±5 knots to a safe manoeuvreing altitude.
(13) Maintains directional control and proper wind-drift correction throughout the take-off and climb.
(14) Completes appropriate checklist.

D. TASK: SHORT-FIELD APPROACH (CONFINED AREA – AMES) AND LANDING (AMEL and AMES)

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to a short-field (confined area AMES) approach and landing.
(2) Adequately surveys the intended landing area (AMES).
(3) Considers the wind conditions, landing surface, obstructions, and selects the most suitable touchdown point.
(4) Establishes the recommended approach and landing configuration and airspeed; adjusts pitch attitude and power as required.
(5) Maintains a stabilised approach and recommended approach airspeed, or in its absence, not more than 1.3 VSO, ±5 knots, with wind gust factor applied.
(6) Makes smooth, timely, and correct control application during the roundout and touchdown.
(7) Selects the proper landing path, contacts the water at the minimum safe airspeed with the proper pitch attitude for the surface conditions (AMES).
(8) Touches down smoothly at minimum control airspeed (AMEL).
(9) Touches down at or within 100 feet (30 meters) beyond a specified point, with no side drift, minimum float, and with the aeroplanes longitudinal axis aligned with and over the runway centre/landing path.

(10) Maintains crosswind correction and directional control throughout the approach and landing sequence.
(11) Applies brakes (AMEL) or elevator control (AMES), as necessary, to stop in the shortest distance consistent with safety.
(12) Utilises after landing runway incursion avoidance procedures.
(13) Completes appropriate checklist.

E. TASK: GLASSY WATER TAKE-OFF AND CLIMB (AMES)

Note: If a glassy water condition does not exist, the applicant shall be evaluated by simulating the TASK.

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to glassy water take-off and climb.
(2) Positions the flight controls and flaps for the existing conditions.
(3) Clears the area; selects an appropriate take-off path considering surface hazards and/or vessels and surface conditions.
(4) Retracts the water rudders as appropriate; advances the throttle smoothly to take-off power.
(5) Establishes and maintains an appropriate planing attitude, directional control, and corrects for porpoising, skipping, and increases in water drag.
(6) Utilises appropriate techniques to lift seaplane from the water considering surface conditions.
(7) Establishes proper attitude/airspeed, and accelerates to VY, ±5 knots during the climb.
(8) Retracts the landing gear, if appropriate, and flaps after a positive rate-of-climb is established.
(9) Maintains take-off power and VY ±5 knots to a safe manoeuvreing altitude.
(10) Maintains directional control and proper wind-drift correction throughout take-off and climb.
(11) Completes the appropriate checklist.

F. TASK: GLASSY WATER APPROACH AND LANDING (AMES)

Note: If a glassy water condition does not exist, the applicant shall be evaluated by simulating the TASK.

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to glassy water approach and landing.
(2) Adequately surveys the intended landing area.
(3) Considers the wind conditions, water depth, hazards, surrounding terrain, and other watercraft.
(4) Selects the most suitable approach path and touchdown area.
(5) Establishes the recommended approach and landing configuration and airspeed, and adjusts pitch attitude and power as required.
(6) Maintains a stabilised approach and the recommended approach airspeed, ±5 knots and maintains a touchdown pitch attitude and descent rate from the last altitude reference until touchdown.
(7) Makes smooth, timely, and correct power and control adjustments to maintain proper pitch attitude and rate of descent to touchdown.

(8) Contacts the water in the proper pitch attitude, and slows to idle taxi speed.
(9) Maintains crosswind correction and directional control throughout the approach and landing sequence.
(10) Completes the appropriate checklist.

G. TASK: ROUGH WATER TAKE-OFF AND CLIMB (AMES)

Note: If a rough water condition does not exist, the applicant shall be evaluated by simulating the TASK.

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to rough water take-off and climb.
(2) Positions the flight controls and flaps for the existing conditions.
(3) Clears the area; selects an appropriate take-off path considering wind, swells surface hazards, and/or vessels.
(4) Retracts the water rudders as appropriate; advances the throttle smoothly to take-off power.
(5) Establishes and maintains an appropriate planing attitude, directional control, and corrects for porpoising, skipping, or excessive bouncing.
(6) Lifts off at minimum airspeed and accelerates to VY, ±5 knots before leaving ground effect.
(7) Retracts the landing gear, if appropriate, and flaps after a positive rate-of-climb is established.
(8) Maintains take-off power and VY ±5 knots to a safe manoeuvreing altitude.
(9) Maintains directional control and proper wind-drift correction throughout take-off and climb.
10. Completes the appropriate checklist.

H. TASK: ROUGH WATER APPROACH AND LANDING (AMES)

Note: If a rough water condition does not exist, the applicant shall be evaluated by simulating the TASK.

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to rough water approach and landing.
(2) Adequately surveys the intended landing area.
(3) Considers the wind conditions, water, depth, hazards, surrounding terrain, and other watercraft.
(4) Selects the most suitable approach path, and touchdown area.
(5) Establishes the recommended approach and landing configuration and airspeed, and adjusts pitch attitude and power as required.
(6) Maintains a stabilised approach and the recommended approach airspeed, or in its absence not more than 1.3 VSO ±5 knots with wind gust factor applied.
(7) Makes smooth, timely, and correct power and control application during the roundout and touch down.
(8) Contacts the water in the proper pitch attitude, and at the proper airspeed, considering the type of rough water.
(9) Maintains crosswind correction and directional control throughout the approach and landing sequence.
(10) Completes the appropriate checklist.

I. TASK: GO-AROUND/REJECTED LANDING (AMEL and AMES)

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to a go-around/rejected landing.
(2) Makes a timely decision to discontinue the approach to landing.
(3) Applies take-off power immediately and transitions to climb pitch attitude for VY and maintains VY ±5 knots.
(4) Retracts flaps, as appropriate.
(5) Retracts the landing gear if appropriate after a positive rate-of-climb is established.
(6) Manoeuvres to the side of runway/landing area to clear and avoid conflicting traffic.
(7) Maintains take-off power and VY ±5 knots to a safe manoeuvreing altitude.
(8) Maintains directional control and proper wind-drift correction throughout the climb.
(9) Completes the appropriate checklist.

V. AREA OF OPERATION: PERFORMANCE MANOEUVRE

A. TASK: STEEP TURNS (AMEL and AMES)

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to steep turns.
(2) Establishes the manufacturer recommended airspeed or if one is not stated, a safe airspeed not to exceed VA.
(3) Rolls into a coordinated 360° steep turn with at least a 50° bank, followed by a 360° steep turn in the opposite direction.
(4) Divides attention between aeroplane control and orientation.
(5) Maintains the entry altitude, ±100 feet (30 meters), airspeed, ±10 knots, bank, ±5°; and rolls out on the entry heading, ±10°.

VI. AREA OF OPERATION: NAVIGATION

A. TASK: PILOTAGE AND DEAD RECKONING (AMEL and AMES)

References: SLCAR 1A

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to pilotage and dead reckoning.
(2) Follows the preplanned course by reference to landmarks.
(3) Identifies landmarks by relating surface features to chart symbols.
(4) Navigates by means of precomputed headings, groundspeed, and elapsed time.
(5) Demonstrates use of magnetic direction indicator in navigation, to include turns to new headings.
(6) Corrects for and records differences between pre-flight groundspeed and heading calculations and those determined en route.
(7) Verifies the aeroplane position within two (2) nautical miles of flight planned route.
(8) Arrives at the en route checkpoints within three (3) minutes of the initial or revised ETA and provides a destination estimate.
(9) Maintains appropriate altitude, ±100 feet (30 meters), and heading, ±10°.

B. TASK: NAVIGATION SYSTEMS AND RADAR SERVICES (AMEL and AMES)

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to navigation systems and radar services.
(2) Demonstrates the ability to use an airborne electronic navigation system.
(3) Locates the aeroplane position using the navigation system.
(4) Intercepts and tracks a given course, radial, or bearing, as appropriate.
(5) Recognises and describes the indication of station passage, if appropriate.
(6) Recognises signal loss and takes appropriate action.
(7) Uses proper communication procedures when utilising radar services.
(8) Maintains the appropriate altitude, ±100 feet (30 meters) and heading, ±10°.

C. TASK: DIVERSION (AMEL and AMES)

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to diversion.
(2) Selects an appropriate alternate aerodrome and route.
(3) Makes an accurate estimate of heading, groundspeed, arrival time, and fuel consumption to the alternate aerodrome.
(4) Maintains the appropriate altitude, ±100 feet (30 meters), and heading, ±10°.

D. TASK: LOST PROCEDURES (AMEL and AMES)

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to lost procedures.
(2) Selects an appropriate course of action.
(3) Maintains an appropriate heading and climbs, if necessary.
(4) Identifies prominent landmarks.
(5) Uses navigation systems/facilities and/or contacts an ATC facility for assistance, as appropriate.

VII. AREA OF OPERATION: SLOW FLIGHT AND STALLS

Note: All stalls for the Commercial Licence will be taken to the "onset" (buffeting) stall condition.

A. TASK: MANOEUVREING DURING SLOW FLIGHT (AMEL and AMES)

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to manoeuvreing during slow flight.
(2) Selects an entry altitude that will allow the TASK to be completed no lower than 3,000 feet (920 meters) AGL.
(3) Establishes and maintains an airspeed at which any further increase in angle of attack, increase in load factor, or reduction in power, would result in an immediate stall.
(4) Accomplishes coordinated straight and level flight, turns, climbs, and descents with landing gear and flap configurations specified by the examiner.
(5) Divides attention between aeroplane control and orientation.
(6) Maintains the specified altitude, ±50 feet (15 meters); specified heading, ±10°; airspeed +5/+0 knots, and specified angle of bank, ±5°.

B. TASK: POWER-OFF STALLS (AMEL and AMES)

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to power-off stalls.

(2) Selects an entry altitude that allows the TASK to be completed no lower than 3,000 feet (460 meters) AGL.

(3) Establishes a stabilised descent in the approach or landing configuration, as specified by the examiner.

(4) Transitions smoothly from the approach or landing attitude to a pitch attitude that will induce a stall.

(5) Maintains a specified heading ±10°, in straight flight; maintains a specified angle of bank, not to exceed 20°, ±5°, in turning flight while inducing the stall.

(6) Recognises and recovers promptly at the "onset" (buffeting) stall condition.

Note: Evaluation criteria for a recovery from an approach to stall should not mandate a predetermined value for altitude loss and should not mandate maintaining altitude during recovery. Proper evaluation criteria should consider the multitude of external and internal variables which affect the recovery altitude.

(7) Retracts the flaps to the recommended setting, retracts the landing gear, if retractable, after a positive rate-of-climb is established.

(8) Accelerates to VX or VY speed before the final flap retraction; returns to the altitude, heading, and airspeed specified by the examiner.

C. TASK: POWER-ON STALLS (AMEL and AMES)

References: POH/AFM

Note: In some high performance aeroplanes, the power setting may have to be reduced below the skill test standards guideline power setting to prevent excessively high pitch attitudes (greater than 30° nose up).

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to power-on stalls.

(2) Selects an entry altitude that allows the TASK to be completed no lower than 3,000 feet (920 meters) AGL.

(3) Establishes the take-off or departure configuration. Sets power to no less than 65 percent available power.

(4) Transitions smoothly from the take-off or departure attitude to a pitch attitude that will induce a stall.

(5) Maintains a specified heading ±5°, in straight flight; maintains a specified angle of bank, not to exceed a 20°, ±10° in turning flight, while inducing the stall.

(6) Recognises and recovers promptly at the "onset" (buffeting) stall condition.

Note: Evaluation criteria for a recovery from an approach to stall should not mandate a predetermined value for altitude loss and should not mandate maintaining altitude during recovery. Proper evaluation criteria should consider the multitude of external and internal variables which affect the recovery altitude.

(7) Retracts flaps to the recommended setting, retracts the landing gear if retractable, after a positive rate-of-climb is established.

(8) Accelerates to VX or VY speed before the final flap retraction; returns to the altitude, heading, and airspeed specified by the examiner.

D. TASK: SPIN AWARENESS (AMEL and AMES)

References: POH/AFM

Objective: To determine that the applicant exhibits satisfactory knowledge of the elements related to spin awareness by explaining:

(1) Aerodynamic factors related to spins.
(2) Flight situations where unintentional spins may occur.
(3) Procedures for recovery from unintentional spins.

VIII. AREA OF OPERATION: EMERGENCY OPERATIONS

Note: Examiners shall select an entry altitude that will allow the single-engine demonstrations TASK to be completed no lower than 3,000 feet (920 meters) AGL or the manufacturers recommended altitude, whichever is higher. At altitudes lower than 3,000 feet (920 meters) AGL, engine failure shall be simulated by reducing throttle to idle and then establishing zero thrust.

A. TASK: EMERGENCY DESCENT (AMEL and AMES)

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to an emergency descent.
(2) Recognises situations, such as depressurisation, cockpit smoke and/or fire that require an emergency descent.
(3) Establishes the appropriate airspeed and configuration for the emergency descent.
(4) Exhibits orientation, division of attention, and proper planning.
(5) Maintains positive load factors during the descent.
(6) Completes appropriate checklists.
(7) Maintains appropriate airspeed, +0/-10 knots and levels off at specified altitude, ±100 feet.

B. TASK: ENGINE FAILURE DURING TAKE-OFF BEFORE VMC (SIMULATED) (AMEL and AMES)

References: POH/AFM

Note: Engine failure (simulated) shall be accomplished before reaching 50 percent of the calculated V_{MC}.

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to the procedure used for engine failure during take-off prior to reaching V_{MC}.
(2) Closes the throttles smoothly and promptly when simulated engine failure occurs.
(3) Maintains directional control and applies brakes (AMEL) or flight controls (AMES), as necessary.

C. TASK: ENGINE FAILURE AFTER LIFT-OFF (SIMULATED) (AMEL and AMES)

Note: Simulated engine failure of the most critical engine shall be demonstrated after liftoff. However, the failure of an engine shall not be simulated until attaining at least V_{SSE}/V_{XSE}/V_{YSE} and at an altitude not lower than 400 feet AGC.

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to the procedure used for engine failure after lift-off.
(2) Recognises a simulated engine failure promptly, maintains control, and utilises appropriate emergency procedures.
(3) Reduces drag, identifies and verifies the inoperative engine after simulated engine failure.

(4) Simulates feathering the propeller on the inoperative engine. Examiner shall then establish zero-thrust on the inoperative engine.
(5) Establishes V_{YSE}; If obstructions are present, establishes V_{XSE} or V_{MC} +5 knots, whichever is greater, until obstructions are cleared. Then transitions to V_{YSE}.
(6) Banks towards the operating engine as required for best performance.
(7) Monitors operating engine and makes adjustments, as necessary.
(8) Recognises the aeroplanes performance capabilities. If a climb is not possible at V_{YSE}, maintain V_{YSE} and return to the departure aerodrome for landing, or initiates an approach to the most suitable landing area available.
(9) Secures the (simulated) inoperative engine.
(10) Maintains heading, ±10°, and airspeed, ±5 knots.
(11) Completes appropriate emergency checklist.

D. TASK: APPROACH AND LANDING WITH AN INOPERATIVE ENGINE (SIMULATED) (AMEL and AMES)

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to an approach and landing with an engine inoperative to include engine failure on final approach.
(2) Recognises engine failure and takes appropriate action, maintains control, and utilises recommended emergency procedures.
(3) Banks towards the operating engine, as required, for best performance.
(4) Monitors the operating engine and makes adjustments as necessary.
(5) Maintains the recommended approach airspeed ±5 knots, and landing configuration with a stabilised approach, until landing is assured.
(6) Makes smooth, timely and correct control applications during roundout and touchdown.
(7) Touches down on the first one-third of available runway, with no drift and the aeroplanes longitudinal axis aligned with and over the runway centre/landing path.
(8) Maintains crosswind correction and directional control throughout the approach and landing sequence.
(9) Completes appropriate checklists.

E. TASK: SYSTEMS AND EQUIPMENT MALFUNCTIONS (AMEL and AMES)

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to systems and equipment malfunctions appropriate to the aeroplane provided for the skill test.
(2) Analyses the situation and takes appropriate action for simulated emergencies appropriate to the aeroplane provided for the skill test for at least five (5) of the following:
  (a) Partial or complete power loss
  (b) Engine roughness or overheat
  (c) Carburetor or induction icing
  (d) Loss of oil pressure
  (e) Fuel starvation
  (f) Electrical malfunction
  (g) Vacuum/pressure, and associated flight instruments malfunction
  (h) Pitot/static

(i) Landing gear or flap malfunction
(j) Inoperative trim
(k) Inadvertant door or window opening
(l) Structural icing
(m) Smoke/fire/engine compartment fire
(n) Any other emergency appropriate to the aeroplane

(3) Follows the appropriate checklist or procedure.

F. TASK: EMERGENCY EQUIPMENT AND SURVIVAL GEAR (ASEL and ASES)

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to emergency equipment and survival gear appropriate to the aeroplane and environment encountered during flight. Identifies appropriate equipment that should be aboard the aeroplane.

IX. AREA OF OPERATION: HIGH-ALTITUDE OPERATIONS

A. TASK: SUPPLEMENTAL OXYGEN (AMEL and AMES)

References: SLCAR Part 6; POH/AFM

Objective: To determine that the applicant exhibits satisfactory knowledge of the elements related to supplemental oxygen by explaining:

(1) Supplemental oxygen requirements for flight crew and passengers when operating nonpressurised aeroplanes.

(2) Identification and differences between "aviators" breathing oxygen" and other types.

(3) Operational characteristics of continuous flow, demand, and pressure-demand oxygen systems.

B. TASK: PRESSURISATION (AMEL and AMES)

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to pressurisation by explaining:
(a) Fundamental concept of cabin pressurisation.
(b) Supplemental oxygen requirements when operating aeroplanes with pressurised cabins.
(c) Physiological hazards associated with high-altitude flight and decompression.

Note: Element 2 applies only if the aeroplane provided for the skill test is equipped for pressurised flight operations.

(2) Operates the pressurisation system properly, and reacts appropriately to simulated pressurisation malfunctions.

X. AREA OF OPERATION: MULTI-ENGINE OPERATIONS

Note: If the applicant is instrument rated, and has previously demonstrated instrument proficiency in a multi-engine aeroplane or does not hold an instrument rating aeroplane, TASKS D and C need not be accomplished.

A. TASK: MANOEUVREING WITH ONE ENGINE INOPERATIVE (AMEL and AMES)

References: POH/AFM

Note: The feathering of one propeller shall be demonstrated in-flight, in a multi-engine aeroplane equipped with propellers which can be safely feathered and unfeathered. The manoeuvre shall be performed at altitudes and positions where safe landings on established aerodromes can be readily accomplished. In the event a propeller cannot be unfeathered during the skill test, it shall be treated as an emergency.

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to manoeuvreing with one engine inoperative.
(2) Recognises engine failure and maintains control.
(3) Sets the engine controls, reduces drag, identifies and verifies the inoperative engine, and feathers appropriate propeller.
(4) Establishes and maintains a bank towards the operating engine as required for best performance in straight and level flight.
(5) Follows the prescribed checklists to verify procedures for securing the inoperative engine.
(6) Monitors the operating engine and makes necessary adjustments.
(7) Demonstrates coordinated flight with one engine inoperative (propeller feathered).
(8) Restarts the inoperative engine using appropriate restart procedures.
(9) Maintains altitude ±100 feet (30 meters) or minimum sink as appropriate and heading ±10°.
(10) Completes the appropriate checklists.

B. TASK: V_{MC} DEMONSTRATION (AMEL and AMES)

References: POH/AFM

Note #1: An applicant seeking an aeroplane – multi-engine land (AMEL) rating, "Limited to Centre Thrust," is not required to be evaluated on this TASK.

Note #2: Aeroplanes with normally aspirated engines will lose power as altitude increases because of the reduced density of the air entering the induction system of the engine. This loss of power will result in a V_{MC} lower than the stall speed at higher altitudes. Therefore, recovery should be made at the first indication of loss of directional control, stall warning, or buffet.

Do not perform this manoeuvre by increasing the pitch attitude to a high angle with both engines operating and then reducing power on the critical engine. This technique is hazardous and may result in loss of aeroplane control.

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to V_{MC} by explaining the causes of loss of directional control at airspeeds less than V_{MC}, the factors affecting V_{MC}, and safe recovery procedures.
(2) Configures the aeroplane at V_{SSE}/V_{YSE}, as appropriate:
    a. Landing gear retracted
    b. Flaps set for take-off
    c. Cowl flaps set for take-off
    d. Trim set for take-off
    e. Propellers set for high RPM
    f. Power on critical engine reduced to idle
    g. Power on operating engine set to take-off or maximum available power
(3) Establishes a single-engine climb attitude with the airspeed at approximately 10 knots above V_{SSE} or V_{YSE}, as appropriate.

(4) Establishes a bank towards the operating engine, as required for best performance and controllability.
(5) Increases the pitch attitude slowly to reduce the airspeed at approximately 1 knot per second while applying rudder pressure to maintain directional control until full rudder is applied.
(6) Recognises indications of loss of directional control, stall warning or buffet.
(7) Recovers promptly by simultaneously reducing power sufficiently on the operating engine while decreasing the angle of attack as necessary to regain airspeed and directional control. Recovery SHOULD NOT be attempted by increasing the power on the simulated failed engine.
(8) Recovers within 20° of the entry heading.
(9) Advances power smoothly on operating engine and accelerates to V_{XSE}/V_{YSE}, as appropriate, ±5 knots, during the recovery.

C. TASK: ENGINE FAILURE DURING FLIGHT (by reference to instruments) (AMEL and AMES)

References: SLCAR Part 1A

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements by explaining the procedures used during instrument flight with one engine inoperative.
(2) Recognises engine failure, sets the engine controls, reduces drag, identifies, and verifies the inoperative engine and simulates feathering appropriate engine propeller.
(3) Establishes and maintains a bank towards the operating engine as required for best performance in straight and level.
(4) Follows the prescribed checklists to verify procedures for securing the inoperative engine.
(5) Monitors the operating engine and makes necessary adjustments.
(6) Demonstrates coordinated flight with one engine inoperative.
(7) Maintains altitude ±100 feet (30 meters), or minimum sink as appropriate and heading ±10°, bank ±5°, and levels off from climbs and descents within ±100 feet (30 meters).

D. TASK: INSTRUMENT APPROACH – ONE-ENGINE INOPERATIVE (by reference to instruments) (AMEL and AMES)

References: SLCAR Part 1A

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements by explaining the procedures used during a published instrument approach with one engine inoperative.
(2) Recognises engine failure, sets the engine controls, reduces drag, identifies and verifies the inoperative engine, and simulates feathering appropriate engine propeller.
(3) Establishes and maintains a bank towards the operating engine, as required, for best performance in straight and level.
(4) Follows the prescribed checklists to verify procedures for securing the inoperative engine.
(5) Monitors the operating engine and makes necessary adjustments.
(6) Requests and receives an actual or a simulated ATC clearance for an instrument approach.
(7) Follows the actual or a simulated ATC clearance for an instrument approach.

(8) Maintains altitude within 100 feet (30 meters), the airspeed within _10 knots if within the aircraft capability, and heading ±10°.
(9) Establishes a rate of descent that will ensure arrival at the MDA or DH/DA, with the aeroplane in a position from which a descent to a landing, on the intended runway can be made, either straight-in or circling as appropriate.
(10) On final approach segment, no more than three-quarter-scale deflection of the CDI/glide slope indicator. For RMI or ADF indicators, within 10° of the course.
(11) Avoids loss of aircraft control, or attempted flight contrary to the engine-inoperative operating limitations of the aircraft.
(12) Complies with the published criteria for the aircraft approach category when circling.
(13) Completes landing and appropriate checklists.

XI. AREA OF OPERATION: POST-FLIGHT PROCEDURES

Note: The examiner shall select TASK A and for AMES applicants at least one other TASK.

A. TASK: AFTER LANDING, PARKING, AND SECURING (AMEL and AMES)

References: POH/AFM
Objective: To determine that the applicant:
(1) Exhibits satisfactory knowledge of the elements related to after landing, parking and securing procedures.
(2) Maintains directional control after touchdown while decelerating to an appropriate speed.
(3) Observes runway hold lines and other surface control markings and lighting.
(4) Parks in an appropriate area, considering the safety of nearby persons and property.
(5) Follows the appropriate procedure for engine shutdown.
(6) Completes the appropriate checklist.
(7) Conducts an appropriate post-flight inspection and secures the aircraft.

B. TASK: ANCHORING (AMES)

References: POH/AFM
Objective: To determine that the applicant:
(1) Exhibits satisfactory knowledge of the elements related to anchoring.
(2) Selects a suitable area for anchoring, considering seaplane movement, water depth, tide, wind, and weather changes.
(3) Uses an adequate number of anchors and lines of sufficient strength and length to ensure the seaplane security.

C. TASK: DOCKING AND MOORING (AMES)

References: POH/AFM
Objective: To determine that the applicant:
(1) Exhibits satisfactory knowledge of the elements related to docking and mooring.
(2) Approaches the dock or mooring buoy in the proper direction considering speed, hazards, wind, and water current.
(3) Ensures seaplane security.

D. TASK: RAMPING/BEACHING (AMES)

References: POH/AFM
Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the elements related to ramping/beaching.
(2) Approaches the ramp/beach considering persons and property, in the proper attitude and direction, at a safe speed, considering water depth, tide, current, and wind.
(3) Ramps/beaches and secures the seaplane in a manner that will protect it from the harmful effect of wind, waves, and changes in water level.

APPENDIX 1: TASK VS FLIGHT SIMULATION DEVICE CREDIT AEROPLANE SINGLE-ENGINE LAND

A1: AEROPLANE SINGLE-ENGINE LAND TASK VS. SIMULATION DEVICE CREDIT

Examiners conducting the Commercial Pilot – Aeroplane Skill Tests with flight simulation devices should consult appropriate documentation to ensure that the device has been approved for training, testing, or checking. The documentation for each device should reflect that the following activities have occurred:

(1) The device must be evaluated, determined to meet the appropriate standards, and assigned the appropriate qualification level by the SLCAA. The device must continue to meet qualification standards through continuing evaluations.

(2) The SLCAA must approve the device for training, testing, and checking the specific flight TASKS listed in this appendix.

Note: There may be an arrangement that allows the CAA to rely on another CAA's FSTD qualification.

(3) The device must continue to support the level of participant or applicant performance required by this STS.

Note: Users of the following chart are cautioned that use of the chart alone is incomplete. The description and OBJECTIVE of each TASK as listed in the body of the STS, including all notes, must also be incorporated for accurate simulation device use.

A2: USE OF CHART

X	Creditable
A	Creditable if appropriate systems are installed and operating
*	Asterisk items require use of flight training device or simulator visual reference

Notes:

(1) Use of Level 1, 2 or Level 3 FTDs is not authorised for the skill test required by this STS.

(2) For skill tests, not more than 50% of the manoeuvres may be accomplished in a flight training device or simulator UNLESS:

(a) Each manoeuvre has been satisfactorily accomplished for an instructor, in the appropriate aeroplane, not less than three (3) times, OR

(b) The applicant has logged not less than 500 hours of flight time as a pilot in aeroplanes.

(3) Not all AREAS OF OPERATION (AOO) and TASKS required by this STS are listed in the appendix. The remaining AOO and TASKS must be accomplished in an aeroplane.

A3: FLIGHT SIMULATION TRAINING DEVICE LEVEL

FLIGHT TASK	FLIGHT SIMULATION DEVICE LEVEL										
AREAS OF OPERATION	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**A**	**B**	**C**	**D**
II. Pre-Flight Procedures											
A. Pre-Flight Inspection	--	--	A	A	X	X	X	X	X	X	X
B. Cockpit Management	--	--	A	A	X	X	X	X	X	X	X
C. Engine Starting	--	--	A	A	X	X	X	X	X	X	X
D. Taxiing	--	--	--	--	--	--	--	--	--	X	X
E. Taxiing and Sailing	--	--	--	A	A	X	X	X	X	X	X
F. Runway Incursion Avoidance	--	--		--	--					X	X
G. Before Take-Off Check	--	--		--	--					X	X
IV. Take-Offs, Landings, and Go-Arounds											
A. Normal and Crosswind Take-Off and Climb	--	--	--	--	--	--	--	--	--	X	X
B. Normal and Crosswind Approach and Landing	--	--	--	--	--	--	--	--	--	X	X
C. Soft-Field Take-Off and Climb	--	--	--	--	--	--	--	X	X	X	X
D. Soft-Field Approach and Landing	--	--		--	--					X	X
E. Short-Field Take-Off (Confined Area – ASES) and Maximum Performance Climb	--	--	--	--	--	X	X	X	X	X	X
F. Short-Field Approach (Confined Area – ASES) and Landing	--	--		--	--					X	X
G. Glassy Water Take-Off and Climb	--	--		--	--					X	X
H. Glassy Water Approach and Landing	--	--		--	--					X	X
I. Rough Water Take-Off and Climb	--	--		--	--					X	X
J. Rough Water Approach and Landing	--	--		--	--					X	X
K. Power-Off 180° Accuracy Approach and Landing	--	--		--	--					X	X
I. Go-Around/Rejected Landing	--	--		--	--					X	X
V. Performance Manoeuvres											
A. Steep Turns	--	--	--	--	--	X	X	X	X	X	X
B. Steep Spiral	--	--		--	--					X	X
C. Chandelles	--	--		--	--					X	X
D. Lazy Eights	--	--		--	--					X	X
VII. Navigation*											
A. Pilotage and Dead Reckoning	--	--	--	--	A	X	X	X	X	X	X
B. Navigation Systems and Radar Services	--	--	--	--	A	X	X	X	X	X	X
C. Diversion	--	--	--	--	A	X	X	X	X	X	X
D. Lost Procedures	--	--		--	--					X	X
VIII. Slow Flight and Stalls											
A. Manoeuvring During Slow Flight	--	--	--	--	--	X	X	X	X	X	X
B. Power-Off Stalls	--	--		--	--					X	X
C. Power-On Stalls	--	--		--	--					X	X
D. Accelerated Stalls	--	--		--	--					X	X
E. Spin Awareness	--	--		--	--					X	X
IX. Emergency Operations											
A. Emergency Descent	--	--	--	--	--	X	X	X	X	X	X
B. Emergency Approach and	--	--	--	--	--	--	--	--	--	X	X

Landing											
C. Systems and Equipment Malfunctions	--	--	--	A	A	X	X	X	X	X	X
X High-Altitude Operations											
A. Supplemental Oxygen	--	--	--	A	A	X	X	X	X	X	X
B. Pressurisation	--	--		--	--					X	X
XI. Post-Flight Procedures											
A. After Landing, Parking and Securing	--	--	--	A	A	X	X	X	X	X	X
B. Anchoring	--	--		--	--					X	X
C. Docking and Mooring	--	--		--	--					X	X
D. Ramping/Beaching	--	--		--	--					X	X

*Aircraft required for those items that cannot be checked using a flight training device or simulator visual reference

APPENDIX 2: TASK VS FLIGHT SIMULATION DEVICE CREDIT AEROPLANE MULTI-ENGINE LAND

A1: AEROPLANE MULTI-ENGINE LAND TASK VS. SIMULATION DEVICE CREDIT

Examiners conducting the Commercial Pilot – Aeroplane Skill Tests with flight simulation devices should consult appropriate documentation to ensure that the device has been approved for training, testing, or checking. The documentation for each device should reflect that the following activities have occurred:

(1) The device must be evaluated, determined to meet the appropriate standards, and assigned the appropriate qualification level by the SLCAA. For purposes of their STS, the SLCAA uses the FSTD qualification standards. The device must continue to meet qualification standards through continuing evaluations.

(2) The SLCAA must approve the device for training, testing, and checking the specific flight TASKS listed in this appendix.

(3) The device must continue to support the level of participant or applicant performance required by the STS.

Note: Users of the following chart are cautioned that use of the chart alone is incomplete. The description and OBJECTIVE of each TASK as listed in the body of the PTS, including all notes, must also be incorporated for accurate simulation device use.

A2: USE OF CHART

X	Creditable
A	Creditable if appropriate systems are installed and operating
*	Asterisk items require use of flight training device or simulator visual reference

Notes:

(1) Use of Level 1, 2 or Level 3 FTDs is not authorised for the skill test required by this STS.

(2) For skill tests, not more than 50% of the manoeuvres may be accomplished in an FTD or simulator UNLESS:

(a) Each manoeuvre has been satisfactorily accomplished for an instructor, in the appropriate aeroplane, not less than three (3) times, OR

(b) The applicant has logged not less than 500 hours of flight time as a pilot in aeroplanes.

(3) Not all AREAS OF OPERATION (AOO) and TASKS required by this PTS are listed in the appendix. The remaining AOO and TASKS must be accomplished in an aeroplane.

A3: FLIGHT SIMULATION TRAINING DEVICE LEVEL

FLIGHT TASK	FLIGHT SIMULATION DEVICE LEVEL										
AREAS OF OPERATION	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**A**	**B**	**C**	**D**
II. Pre-Flight Procedures											
A. Pre-Flight Inspection (Cockpit Only)	-- --	-- --	-- --	A	A	X	X	X	X	X	X
B. Cockpit Management	--	-- --	-- --	A	A	X	X	X	X	X	X
C. Engine Starting	--	-- --	-- --	A	A	X	X	X	X	X	X
D. Taxiing	--	--	--	--	--	--	--	--	--	X	X
E. Before Take-Off Check	--	-- --	-- --	A	A	X	X	X	X	X	X
IV. Take-Offs, Landings, and Go-Arounds											
A. Normal and Crosswind Take-Off and Climb	--	--	--	--	--	--	--	--	--	X	X
B. Normal and Crosswind Approach and Landing	--	--	--	--	--	--	--	--	--	X	X
C. Short-Field Take-Off and Climb	--	--	--	--	--	--	--	X	X	X	X
D. Short-Field Approach and Landing	--	--		--	--	--	--	--	--	X	X
E. Go-Around*	--	--	-- --	--	--	X	X	X	X	X	X
V. Performance Manoeuvres											
A. Steep Turns	--	--	-- --	--	--	X	X	X	X	X	X
VI. Navigation*											
B. Navigation Systems and ATC Radar Services	--	-- --	-- --	--	A	X	X	X	X	X	X
C. Diversion	--	-- --	-- --	--	A	X	X	X	X	X	X
D. Lost Procedures	--	-- --	-- --	--	A	X	X	X	X	X	X
VII. Slow Flight and Stalls											
A. Manoeuvreing During Slow Flight	--	--	-- --	--	--	X	X	X	X	X	X
VIII. Emergency Operations											
A. Emergency Descent	--	--	--	--	--	X	X	X	X	X	X
B. Engine Failure During Take-Off Before VMC	--	--	--	--	--	--	--	X	X	X	X
C. Engine Failure After Lift-Off (simulated)	--	--	--	--	--	--	--	X	X	X	X
D. Approach and Landing With an Inoperative Engine (simulated)	--	--	--	--	--	--	--	--	--	--	--
E. Systems and Equipment Malfunctions	--	--	--	A	A	X	X	X	X	X	X
IX. High-Altitude Operations											
B. Pressurisation	-	-	-	A	A	X	X	X	X	X	X
X Multiengine Operations											
C Engine Failure During Flight (by reference to instruments)	--	--	-	--	--	X	X	X	X	X	X
D. Instrument Approach – One-Engine Inoperative (by reference to instruments)	--	--	--	--	--	--	--	X	X	X	X

XI. Post-Flight Procedures											
A. After Landing, Parking, and Securing	--	-		A	A	X	X	X	X	X	X

*Aircraft required for those items that cannot be checked using a flight training device or flight simulator.