SIERRA LEONE CIVIL AVIATION AUTHORITY

ADVISORY CIRCULAR

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Airline Transport 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 Advisory Circulars (ACs). This AC establishes the standards for the Airline Transport Pilot – Aeroplane Skill Test and Aeroplane Type Rating Skill Test. 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 ACs 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 listed below. SLCAR Part 1 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:

Sierra Leone Civil Aviation Authority
3rd Floor NDB Building
21/23, Siaka Stevens Street.
Freetown, Sierra Leone

SECTION ONE: INSTRUCTIONS

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 the ATP Aeroplane Skill Test and Aeroplane Type Rating Skill Test. 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 the Airline Transport Pilot Licence (ATPL) Aeroplane Skill Test and Aeroplane Type Rating Skill Test. 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

SLCAR Part 1 specifies the areas in which knowledge and skill must be demonstrated by the applicant before the issuance of a licence or rating. 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 Airline Transport Pilot Licence – Aeroplane and Aeroplane Type Rating STS.
This STS includes AREAS OF OPERATION and TASKS for the initial issuance of an airline transport pilot licence and for the addition of category, class, and aircraft type ratings to an airline transport pilot licence and for the addition of category, class, and aircraft type ratings to that licence.

(2) The AREAS OF OPERATION are divided into two sections. The first AREA OF OPERATION in each section is conducted on the ground to determine the applicant's knowledge of the aircraft, equipment, performance, and limitations. The eight AREAS OF OPERATION located in Section 3, numbered II–IX, are considered to be the flight portion of the skill test. All eight of these AREAS OF OPERATION test the applicant's knowledge and skills.

(3) If all TASKS of the skill test are not completed on one date, all remaining TASKS of the test must be satisfactorily completed not more than 60 calendar days after the date on which the applicant began the test.

(4) 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.

(5) TASKS are titles of knowledge areas, flight procedures, or manoeuvres appropriate to an AREA OF OPERATION.

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

(7) 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
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AIP	Aeronautical Information Publication
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MEL	Minimum Equipment List
RESERVED	
IAP	Instrument Approach Procedure Charts
POH	Pilot's Operation Handbooks
STARS	Standard Terminal Arrival Routes
SIAP	Standard Instrument Approach Procedure Charts
NOTAMS	Notices to Airmen
RESERVED	

(8) 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

(9) The following abbreviations have the meanings shown:

ADF	Automatic Direction Finder
ADM	Aeronautical Decision Making
NIMET	Airmen's Meteorological Advisories
APV	Approach with Vertical Guidance
ATC	Air Traffic Control
ATIS	Automatic Terminal Information Service
ATS	Air Traffic Service
SLCARS	Sierra Leone 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	Nonprecision 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

(10) 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. The TASKS in this STS are for an initial airline transport pilot licence or the addition of a category, class or aircraft type rating to an airline transport pilot licence. All appropriate TASKS required for an initial type rating are also required for pilot-in-command proficiency checks conducted in accordance with SLCAR Part 1.

(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) 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 be used 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.**

(4) 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 OBJECTIVES 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.

(5) When using the STS, the examiner must evaluate the applicant's knowledge and skill in sufficient depth to determine that the standards of performance listed for all TASKS are met.

(6) All TASKS in the STS are required for the issuance of an Airline Transport Pilot Licence and Aircraft Type Rating. However, when a particular element is not appropriate to the aircraft, its equipment, or operational capability, that element may be omitted. Examples of element exceptions are: integrated flight systems for aircraft not so equipped, operation of landing gear in fixed gear aircraft, multi-engine TASKs in single-engine aircraft, or other situations where the aircraft operation is not compatible with the requirement of the element.

1.5.1 Aircraft Type Ratings Limited to "VFR Only"

Pilot applicants who wish to add a type rating, limited to VFR, to their licence must take a skill test that includes the following items:

SECTION TWO: AIRLINE TRANSPORT PILOT – AEROPLANE AND AEROPLANE TYPE RATING SKILL TEST STANDARDS

I. AREA OF OPERATION: PRE-FLIGHT PREPARATION

A. Task: Equipment Examination

B. Task: Performance and Limitations

C. Task: Water and Seaplane Characteristics (AMES/ASES)

D. Task: Seaplane Bases, Maritime Rules, Aids to Marine Navigation

II. AREA OF OPERATION: PRE-FLIGHT PREPARATION

A. Task: Pre-Flight Inspection

B. Task: Powerplant Start

C. Task: Taxiing

D. Task: Sailing (AMES/ASES)

E. Task: Seaplane Base/Water Landing Site Markings and Lighting (AMES/ASES)

F. Task: Pre-Take-Off Checks

III. AREA OF OPERATION: TAKE-OFF AND DEPARTURE PHASE

A. Task: Normal and Crosswind Take-Off

B. Task: Glassy Water Take-Off and Climb (AMES/ASES)

C. Task: Rough Water Take-Off and Climb (AMES/ASES)

D. Task: Confined-Area Take-Off and Climb (AMES/ASES)

E. Task: Instrument Take-Off

F. Task: Powerplant Failure During Take-Off

G. Task: Rejected Take-Off

H. Task: Departure Procedures

IV. AREA OF OPERATION: IN-FLIGHT MANOEURVRES

A. Task: Steep Turns

B. Task: Approaches to Stalls and Stall Recovery

C. Task: Powerplant Failure _ Multi-Engine

D. Task: Powerplant Failure _ Single-Engine Aeroplane

E. Task: Specific Flight Characteristics

F. Task: Recovery from Unusual Attitudes

1.5.2 Removal of the "Limited to Centre Thrust" Limitation

(1) The removal of the "Limited to Centre Thrust" limitation at the airline transport pilot licence level requires an applicant to satisfactorily perform the following AREAS OF OPERATION and TASKS from the Airline Transport Pilot and Aircraft Type Rating STS and the Commercial Pilot STS –

Aeroplane during the skill test in a multi-engine aeroplane that has a manufacturers published V_{MC} speed:

(2) From the Airline Transport Pilot and Aircraft Type Rating STS:

III. AREA OF OPERATION: TAKE-OFF AND DEPARTURE PHASE

F. TASK: Powerplant Failure During Take-off

G. TASK: Rejected Take-off

IV. AREA OF OPERATION: IN-FLIGHT MANOEUVRES

C. TASK: Powerplant Failure – Multi-engine Aeroplane

VI. AREA OF OPERATION: LANDINGS AND APPROACHES TO LANDINGS

C. TASK: Approach and Landing with (Simulated) Powerplant Failure – Multi-engine Aeroplane

(3) From the Commercial Pilot Skill Test Standards – Aeroplane, Section III, Commercial Pilot Aeroplane – Multi-engine Land and Multi-engine Sea.

VII. AREA OF OPERATION: PRE-FLIGHT PREPARATION

H. TASK: Principles of Flight – Engine Inoperative

X. AREA OF OPERATION: MULTI-ENGINE OPERATIONS

A. TASK: Manoeuvreing with One Engine Inoperative

B. TASK: V_{MC} Demonstration

Note: A flight simulator or flight training device representative of a multi-engine aeroplane, with a manufacturers published V_{MC} speed, may be used if used in accordance with a programme approved for a Approved Training Organisation (ATO) certificate holder under SLCAR Part 1B.

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 and good cockpit discipline during taxi operations, hot spots, and NOTAMs;
(g) CFIT;
(h) ADM and risk management;
(i) Crew resource management or single-pilot resource management to include automation management;
(j) Recognition of wing contamination to icing.
(k) Adverse effects of wing contamination in icing conditions during takeoff, cruise, and landing phases of flight.
(l) Icing procedures of information published by the manufacturer, within the AFM, that is specific to the type of aircraft.
(m) Traffic awareness.

(2) Although these areas may not be specifically addressed under each TASK, they are essential to flight safety and will be evaluated during the skill test. In all instances, the applicant's actions must relate to the complete situation.

(3) Prior to the test, the examiner must explain, and the applicant must understand, the examiner's role regarding air traffic control, crew resource management, and the duties and responsibilities of the examiner through all phases of the skill test.

1.7 SKILL TEST PREREQUISITES

1.7.1 Airline Transport Pilot

An applicant for an ATP – Aeroplane Skill Test is required to:

(1) Meet the applicable requirements in SLCAR 1 for a ATPL – Aeroplane rating;

(2) Hold the appropriate medical certificate;

(3) Pass the required knowledge test; and

(4) **Instructor Authorisation:** 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.

1.7.2 Aircraft Type Rating

(1) An applicant for a type rating in an aeroplane is required by SLCAR Part 1A to have:

(a) The applicable experience;

(b) A minimum of a third-class medical certificate, if a medical certificate is required (not required for simulator);

(c) The appropriate category and class rating, or accomplish the appropriate TASKS in the private/commercial pilot STSs;

(d) Received and logged ground training from an authorised ground or flight instructor on the AREAS OF OPERATION in this skill test standard that apply to the aircraft type rating sought; and

(e) Received a logbook endorsement from the instructor who conducted the training, certifying that the applicant completed all the training on the AREAS OF OPERATION in this skill test standard that apply to the aircraft type rating sought.

(2) If the applicant is an employee of an air operator certificate holder under the SLCARs, the applicant may present a training record that shows the satisfactory completion of that certificate holder's approved pilot-in-command training programme for the aircraft type rating sought, instead of the requirements (d) and (e) above.

(3) An applicant who holds a private pilot or limited commercial pilot licence is required to have passed the appropriate instrument rating knowledge test since the beginning of the 24th month before the skill test is taken if the test is for the concurrent issuance of an instrument rating and an aircraft type rating.

(4) If an applicant is taking a skill test for the issuance of a private or commercial pilot with an aeroplane rating, in an aircraft that requires a type rating, Private Pilot Skill Test Standards or Commercial Pilot Skill Test Standards, as appropriate to the licence, must be used in conjunction with this STS. Also, the current Instrument Rating Skill Test Standard must be used in conjunction with this STS if the applicant is concurrently taking a skill test for the issuance of an instrument rating and a type rating. The TASKs that are in the Private Pilot, Commercial Pilot, or Instrument Rating STS (and not listed in this STS) must be accomplished. An amphibian type rating must bear the limitation "LIMITED TO LAND" or "LIMITED TO SEA," as appropriate, unless the applicant demonstrates proficiency in both land and sea operations.

1.8 AIRCRAFT AND EQUIPMENT REQUIRED FOR THE SKILL TEST

(1) If the skill test is conducted in an aeroplane, the applicant is required to provide an appropriate and airworthy aeroplane for use during the skill test. Its operating

limitations must not prohibit the TASKs required on the skill test. Multi-engine certification flight checks require normal engine shutdowns and restarts in the air to include propeller feathering and unfeathering. The AFM must not prohibit these procedures. (Low power settings for cooling periods prior to the actual shutdown are acceptable and encouraged as the AFM states.) The exception is for type ratings when that particular aeroplane was not certificated with in-flight unfeathering capability. For those aeroplanes ONLY, simulated powerplant failures will suffice.

(2) Flight instruments are those required for controlling the aircraft without outside references. The required radio equipment is that which is necessary for communications with ATC, and for the performance of instrument approach procedures. GPS equipment must be instrument certified and contain the current database.

(3) If the skill test is conducted in an aeroplane, the applicant is required to provide an appropriate view limiting device that is acceptable to the examiner. The device must be used during all testing that requires testing "solely by reference to instruments." This device must prevent the applicant from having visual reference outside the aircraft, but not prevent the examiner from having visual reference outside the aircraft. A procedure should be established between the applicant and the examiner as to when and how this device should be donned and removed and this procedure briefed before the flight.

(4) The applicant is expected to demonstrate automation management skills in utilizing the autopilot, avionics and systems displays, and/or flight management system (FMS), as applicable to installed equipment, during the skill test to assist in the management of the aircraft. The examiner is expected to test the applicant's knowledge of the systems that are installed and operative during the oral and flight portions of the skill test. This is specifically to include meanings and limitations of aerodrome, taxiway, and runway signs, lights, and markings.

(5) If the skill test is conducted in the aeroplane and the aeroplane has an operable and properly installed GPS, the applicant must demonstrate GPS approach proficiency. If the applicant has contracted for training in an approved course that includes GPS training, and the aeroplane/simulator/FTD has a properly installed and operable GPS, the applicant must demonstrate GPS approach proficiency. When a skill test is conducted for a SLCAR Part 26 operator, the operators approved training programme is controlling.

Note: The applicant must perform the tasks, except for water operations, in actual or simulated instrument conditions unless the skill test cannot be accomplished under instrument flight rules because the aircraft's type certificate makes the aircraft incapable of operating under instrument flight rules.

1.9 USE OF SLCAA-APPROVED FLIGHT SIMULATION TRAINING DEVICE

(1) In the AREA OF OPERATION labelled "PRE-FLIGHT PREPARATION," the TASKs are knowledge only. These TASKs do not require the use of a flight simulation training device (FSTD) or an aircraft to accomplish, but they may be used.

(2) Each in-flight manoeuvre or procedure must be performed by the applicant in an FSTD) or an aircraft. Appendix 1 of this skill test standard should be consulted to identify the manoeuvres or procedures that may be accomplished in an FSTD or flight simulator. The level of FSTD or flight simulator required for each manoeuvre or procedure is also found in Appendix 1.

(3) When accomplished in an aircraft, certain TASK elements may be accomplished through "simulated" actions in the interest of safety and practicality, but when accomplished in an FSTD 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, and simulating the disconnection of associated electrics, hydraulics, pneumatics, etc.

(4) However, when the same emergency condition is addressed in an, all TASK elements must be accomplished as would be expected under actual circumstances. Similarly, safety of flight precautions taken in the aircraft for the accomplishment of a specific manoeuvre or procedure (such as limiting the altitude in an approach to stall, or setting maximum airspeed for a rejected take-off) need not be taken when an FSTD or a flight simulator is used.

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 students. 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, and runway incursion avoidance procedures.

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) In accordance with the requirements of SLCAR Part 1A: 2.2 and ICAO English Language Proficiency Requirements at ICAO Annex 1: 1.2.9, the examiner must accomplish the entire application process and test in the English language. The English language component of crew coordination and communication skills can never be in doubt for the satisfactory outcome of the test. Normal restatement of questions as would be done for a native English speaking applicant is still permitted and not grounds for disqualification.

(3) The equipment examination in Section Two: AREA OF OPERATION, I. Pre-Flight Preparation, must be closely coordinated and related to the flight portion of the skill test in the remaining AREAS OF OPERATION, but must not be given during the flight portion of the skill test. The equipment examination should be administered prior (it may be the same day) to the flight portion of the skill test. The examiner may accept written evidence of the equipment exam if the exam is approved by the Administrator and administered by an individual authorised by the Administrator. The examiner shall use whatever means deemed suitable to determine that the applicant's equipment knowledge meets the standard.

(4) The AREAS OF OPERATION in Section 2 contain TASKs, which include both "knowledge" and "skill" elements. The examiner must ask the applicant to perform the skill elements. Knowledge elements not evident in the demonstrated skills may be tested by questioning, at any time, during the flight event. This specifically should include meanings and limitations of aerodrome, taxiway, and runways signs, lights, and markings. Questioning in-flight should be used judiciously so that safety is not jeopardised. Questions may be deferred until after the flight portion of the test is completed.

(5) For aircraft requiring only one pilot, the examiner may not assist the applicant in the management of the aircraft, radio communications, tuning and identifying navigational equipment, or using navigation charts. If the examiner, other than an SLCAA Inspector, is qualified and current in the specific make and model aircraft that is certified for two or more crew members, he or she may occupy a duty position.

(6) If the examiner occupies a duty position on an aircraft that requires two or more crew members, the examiner must fulfill the duties of that position. Moreover, when occupying a required duty position, the examiner must perform crew resource management (CRM) functions as briefed and requested by the applicant except during the accomplishment of steep turns and approach to stalls. During these two TASKs the applicant must demonstrate their ability to control the aircraft without the intervention from the non-flying pilot.

(7) SAFETY OF FLIGHT must be the prime consideration at all times. The examiner, applicant, and crew must be constantly alert for other traffic

1.12 SATISFACTORY PERFORMANCE

(1) Satisfactory performance to meet the requirements for licensing is based on the applicant's ability to safely:

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

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

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

(d) Demonstrate sound judgement and ADM; and

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

(2) "Knowledge" means the applicant can describe in general or specific terms a response to the examiner's question.

(3) "Satisfactory knowledge" means the applicant's answer contains at least 70 percent of the reference answer to the examiner's question ("textbook answer") and if the applicant's actions followed his/her response, the safety of the aeroplane would never seriously be in doubt.

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 tolerances stated in this standard are intended to be used as a measurement of the applicant's ability to operate in the instrument environment. They provide

guidance for examiners to use in judging the applicant's qualifications. The regulations governing the operation under Instrument Flight Rules are established in SLCAR Part 6.

(3) 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.

(4) 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.

(5) When a 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 D, Landing From a Circling Approach, failure to avoid runway incursion.

(6) 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) 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 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 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 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 PROCESSS 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) - RESERVED

1.18 HOW THE EXAMINER APPLIES CRM/SRM

(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'S USE OF CHECKLISTS

Throughout the skill test, the applicant is evaluated on the use of an appropriate checklist. In crew served aeroplanes, the applicant as PIC (acting) should coordinate all checklists with the crew to ensure all items are accomplished in a timely manner. The applicant as acting PIC should manage the flight to include crew checklist performance, requiring standard callouts, announcing intentions, and initiating checklist procedures. If the aeroplane is a single-pilot aeroplane, the applicant should demonstrate CRM principles described as single-pilot resource management (SRM). 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 impractical, especially in a single-pilot operation. In this case, a review of the checklist after the elements have been accomplished would be appropriate. Use of a checklist should also consider visual scanning and division of attention at all times.

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 pilots 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 TASK RATING TABLE (RESERVED)

SECTION TWO: AIRLINE TRANSPORT PILOT LICENCE – AEROPLANE AND AEROPLANE TYPE RATING 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)

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

APPLICANT'S NAME:_____

LOCATION:_____

DATE/TIME:_____

I. PREFLIGHT PREPARATION

- **A.** Equipment Examination
- **B.** Performance and Limitations
- **C.** Water and Seaplane Characteristics (AMES/ASES)
- **D.** Seaplane Bases, Maritime Rules, and Aids to Marine Navigation (AMESASES)

II. PREFLIGHT PROCEDURES

- **A.** Preflight Inspection
- **B.** Powerplant Start
- **C.** Taxiing
- **D.** Sailing (AMES/ASES)
- **E.** Seaplane Base/Water Landing Site Markings and Lighting (AMES/ASES)
- **F.** Pre-Take-Off Checks

III. TAKE OFF AND DEPARTURE PHASE

- **A.** Normal and Crosswind Takeoff
- **B.** Glassy Water Takeoff and Climb (AMES/ASES)
- **C.** Rough Water Takeoff and Climb (AMES/ASES)
- **D.** Confined Area Takeoff and Climb (AMES/ASES)
- **E.** Instrument Take-Off
- **F.** Powerplant Failure During Take-Off
- **G.** Rejected Take-Off
- **H.** Departure Procedures

IV. IN-FLIGHT MANOEUVRE

- **A.** Steep Turns
- **B.** Approaches to Stalls and Stall Recovery
- **C.** Powerplant Failure-Multi-Engine Aeroplane
- **D.** Specific Flight Characteristics
- **E.** Recovery from Unusual Altitudes

V. INSTRUMENT PROCEDURES

- **A.** Standard Terminal Arrival/Flight Management System Procedures
- **B.** Holding
- **C.** Precision Approaches (PA)
- **D.** Non-Precision Approaches (NPA)

E. Circling Approach

F. Missed Approach

VI. LANDINGS AND APPROACHES TO LANDINGS

A. Normal and Crosswind Approaches and Landings

B. Landing from a Precision Approach

C. Approach and Landing with (Simulated) Powerplant Failure –Multi-Engine-Aeroplane

D. Landing from a Circling Approach

E. Rough Water Approach and Landing (AMES/ASES)

F. Glassy Water Approach and Landing (AMES/ASES)

G. Confined-Area Approach and Landing (AMES/ASES)

H. Rejected Landing

I. Landing from a No Flap or a Non Standard Flap Approach.

VII. NORMAL AND ABNORMAL PROCEDURES

A. Normal and Abnormal Procedures

VIII. EMERGENCY PROCEDURES

A. Emergency Procedures

IX. POST FLIGHT PROCEDURES

A. After Landing Procedures

B. Anchoring (AMES/ASES)

C. Docking and Mooring (AMES/ASES)

D. Beaching (AMES/ASES)

E. Ramping (AMES/ASES)

F. Parking and Securing

1.3 AREAS OF OPERATION

I. AREA OF OPERATION: PRE-FLIGHT PREPARATION

A. TASK: EQUIPMENT EXAMINATION

References: SLCAR Part 1A; POH; AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge appropriate to the aeroplane; its systems and components; its normal, abnormal, and emergency procedures; and uses the correct terminology with regard to the following items:

(a) Landing gear – extension/retraction system(s); indicators, float devices, brakes, antiskid, tires, nose-wheel steering, and shock absorbers.

(b) Powerplant – controls and indications, induction system, carburetor and fuel injection, turbocharging, cooling, fire detection/protection, mounting points, turbine wheels, compressors, de-icing, anti-icing, and other related components.

(c) Propellers – type, controls, feathering/unfeathering, auto- feather, negative torque sensing, synchronising, and synchrophasing.

(d) Fuel system – capacity; drains; pumps; controls; indicators; crossfeeding; transferring; jettison; fuel grade, colour and additives; fueling and defueling procedures; and fuel substitutions, if applicable.

(e) Oil system – capacity, grade, quantities, and indicators.

(f) Hydraulic system – capacity, pumps, pressure, reservoirs, grade, and regulators.

(g) Electrical system – alternators, generators, battery, circuit breakers and protection devices, controls, indicators, and external and auxiliary power sources and ratings.

(h) Environmental systems – heating, cooling, ventilation, oxygen and pressurisation, controls, indicators, and regulating devices.

(i) Avionics and communications – autopilot; flight director; Electronic Flight Instrument Systems (EFIS); Flight Management System(s) (FMS); Doppler Radar; Inertial Navigation Systems (INS); Global Positioning System/ Wide Area Augmentation System/Local Area Augmentation System (GPS/WAAS/LAAS); VOR, NDB, ILS, GLS, RNAV systems and components; traffic (MLS deleted) awareness/warning/avoidance systems, terrain awareness/warning/alert systems; other avionics or communications equipment, as appropriate; indicating devices; transponder; and emergency locator transmitter.

(j) Ice protection – anti-ice, de-ice, pitot-static system protection, propeller, windshield, wing and tail surfaces.

(k) Crew member and passenger equipment – oxygen system, survival gear, emergency exits, evacuation procedures and crew duties, and quick donning oxygen mask for crew members and passengers.

(l) Flight controls – ailerons, elevator(s), rudder(s), control tabs, balance tabs, stabiliser, flaps, spoilers, leading edge flaps/slats and trim systems.

(m) Pitot-static system with associated instruments and the power source for the flight instruments.

(2) Exhibits satisfactory knowledge of the contents of the POH or AFM with regard to the systems and components listed in paragraph 1 (above); the Minimum Equipment List (MEL) and/or configuration deviation list (CDL), if appropriate; and the operations specifications, if applicable.

B. TASK: PERFORMANCE AND LIMITATIONS

References: SLCAR Parts 1A, 6 and 22; POH; AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of performance and limitations, including a thorough knowledge of the adverse effects of exceeding any limitation.

(2) Demonstrates proficient use of (as appropriate to the aeroplane) performance charts, tables, graphs, or other data relating to items, such as:

(a) Departure aerodrome, taxiway, and runway NOTAMs, runway usable lengths, HOT Spots, taxi restrictions, specific taxi procedures, as applicable, and signage/markings

(b) Accelerate- stop distance

(c) Accelerate- go distance

(d) Take-off performance – all engines and with engine(s) inoperative

(e) Climb performance including segmented climb performance with all engines operating – with one or more engine(s) inoperative, and with other engine malfunctions as may be appropriate

(f) Service ceiling – all engines, with engines(s) inoperative, including drift down, if appropriate

(g) Cruise performance

(h) Fuel consumption, range, and endurance

(i) Descent performance

(j) Arrival aerdrome, taxiway, and runway NOTAMs, runway usuable lengths, HOT Spots, tax restrictions, specific tax procedures as applicable, and signage/markings.

(k) Landing distance

(l) Land and hold short operations (LAHSO)

(m) Go-around from rejected landings (landing climb)

(n) Other performance data (appropriate to the aeroplane)

(3) Describes (as appropriate to the aeroplane) the airspeeds used during specific phases of flight.

(4) Describes the effects of meteorological conditions upon performance characteristics and correctly applies these factors to a specific chart, table, graph, or other performance data.

(5) Computes the centre-of-gravity location for a specific load condition (as specified by the examiner), including adding, removing, or shifting weight.

(6) Determines if the computed centre-of-gravity is within the forward and aft centre-of-gravity limits, and that lateral fuel balance is within limits for take-off and landing.

(7) Demonstrates adequate knowledge of the adverse effects of airframe icing during pretake-off, take-off, cruise and landing phases of flight and corrective actions.

(8) Demonstrates adequate knowledge of procedures for wing contamination recognition and adverse effects of airframe icing during pre-take-off, take-off, cruise, and landing phases of flight. (Pilots applying for an aircraft type rating should have adequate knowledge of icing procedures and/or available information published by the manufacturer that is specific to that type of aircraft.)

(9) Demonstrates good planning and knowledge of procedures in applying operational factors affecting aeroplane performance.

(10) Demonstrates knowledge of the stabilised approach procedures and the decision criteria for go-around or rejected landings.

C. TASK: WATER AND SEAPLANE CHARACTERISTICS (AMES/ASES)

References: SLCAR Part 1A

Objective: To determine that the applicant exhibits 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) Direction and strength of the water current
   (c) Presence of floating and partially submerged debris
   (d) Protected and unprotected areas
   (e) Effect of surface wind and method of determining its force
   (f) Operating near sandbars, islands, and shoals
   (g) Other pertinent characteristics deemed important by the examiner
(2) Float and hull construction and their effect on seaplane/flying boat performance.
(3) Causes of porpoising and skipping, and pilot action to prevent or correct these occurrences.

D. TASK: SEAPLANE BASES, MARITIME RULES, AND AIDS TO MARINE NAVIGATION (AMES/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 identify and locate seaplane bases on charts or in directories
(2) Operating restrictions at seaplane bases
(3) Right-of-way, steering, and sailing rules pertinent to seaplane operation
(4) Purpose and identification of marine navigation aids, such as buoys, beacons, lights, and range markers
(5) Naval Vessel Protection Zones
(6) No Wake Zones

II. AREA OF OPERATION: PRE-FLIGHT PROCEDURES

A. TASK: PRE-FLIGHT INSPECTION

References: SLCAR Parts 1A and 6; POH/AFM

Note: If a flight engineer (FE) is a required crew member for a particular type aeroplane, the actual visual inspection may be waived. The actual visual inspection may be replaced by using an approved pictorial means that realistically portrays the location and detail of inspection items. On aeroplanes requiring an FE, an applicant must demonstrate satisfactory knowledge of the FE functions for the safe completion of the flight if the FE becomes ill or incapacitated during a flight.

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the pre-flight inspection procedures, while explaining briefly:
   (a) The purpose of inspecting the items which must be checked.
   (b) How to detect possible defects.
   (c) The corrective action to take.
(2) Exhibits satisfactory knowledge of the operational status of the aeroplane by locating and explaining the significance and importance of related documents, such as:
   (a) Airworthiness and registration certificates.
   (b) Operating limitations, handbooks, and manuals.
   (c) Minimum equipment list (MEL), if appropriate.
   (d) Weight and balance data.

(e) Maintenance requirements, tests, and appropriate records applicable to the proposed flight or operation; and maintenance that may be performed by the pilot or other designated crew member.

(3) Uses the appropriate checklist or coordinates with crew to ensure completion of checklist items in a timely manner and as recommended by the manufacturer or approved method to inspect the aeroplane externally and internally.

(4) Verifies the aeroplane is safe for flight by emphasising (as appropriate) the need to look at and explain the purpose of inspecting items, such as:
(a) Powerplant, including controls and indicators.
(b) Fuel quantity, grade, type, contamination safeguards, and servicing procedures.
(c) Oil quantity, grade, and type.
(d) Hydraulic fluid quantity, grade, type, and servicing procedures.
(e) Oxygen quantity, pressures, servicing procedures, and associated systems and equipment for crew and passengers.
(f) Hull, landing gear, float devices, brakes, steering system, winglets, and canards.
(g) Tires for condition, inflation, and correct mounting, where applicable.
(h) Fire protection/detection systems for proper operation, servicing, pressures, and discharge indications.
(i) Pneumatic system pressures and servicing.
(j) Ground environmental systems for proper servicing and operation.
(k) Auxiliary power unit (APU) for servicing and operation.
(l) Flight control systems including trim, spoilers, and leading/trailing edge.
(m) Anti-ice, de-ice systems, servicing, and operation.
(n) Installed and auxiliary aircraft security equipment, as appropriate.

(5) Coordinates with ground crew and ensures adequate clearance prior to moving any devices, such as door, hatches, and flight control surfaces.

(6) Complies with the provisions of the appropriate operations specifications, if applicable, as they pertain to the particular aeroplane and operation.

(7) Demonstrates proper operation of all applicable aeroplane systems.

(8) Notes any discrepancies, determines if the aeroplane is airworthy and safe for flight, or takes the proper corrective action, and acknowledges limitations imposed by MEL/CDL items.

(9) Checks the general area around the aeroplane for hazards to the safety of the aeroplane and personnel.

(10) Ensures that the aeroplane and surfaces are free of ice, snow, and has satisfactory knowledge of de-icing procedures, if icing conditions were present or ice was found.

B. TASK: POWERPLANT START

References: SLCAR Part 1A; POH/AFM

Objective: To determine that the applicant:

(1) Exhibits adequate knowledge of the correct powerplant start procedures including the use of an auxiliary power unit (APU) or external power source, starting under various atmospheric conditions, normal and abnormal starting limitations, and the proper action required in the event of a malfunction.

(2) Ensures the ground safety procedures are followed during the before-start, start, and afterstart phases.

(3) Ensures the use of appropriate ground crew personnel during the start procedures.

(4) Performs all items of the start procedures by systematically following the approved checklist procedure in a timely manner and as recommended by the manufacturer for the before-start, start, and after-start phases.
(5) Demonstrates sound judgement and operating practices in those instances where specific instructions or checklist items are not published.

C. TASK: TAXIING

References: SLCAR Part 1A; POH/AFM;
Objective: To determine that the applicant:
(1) Exhibits adequate knowledge of safe taxi procedures (as appropriate to the aeroplane including push-back or power-back, as may be applicable).
(2) Demonstrating and explaining procedures for holding the pilots workload to a minimum during taxi operations.
(3) Exhibiting taxi operation planning procedures, such as recording taxi instructions, reading back taxi clearances, and reviewing taxi routes on the aerodrome diagram.
(4) Demonstrating procedures to insure that clearance or instructions that are actually received are adhered to rather than the ones expected to be received.
(5) Know, explain and discuss the hazards of low visibility operations.
(6) Demonstrates proficiency by maintaining correct and positive aeroplane control. In aeroplanes equipped with float devices, this includes water taxiing, sailing, step taxiing, approaching a buoy, and docking.
(7) Maintains proper spacing on other aircraft, obstructions, and persons.
(8) Accomplishes the applicable checklist items or ensures all required checks as required by the appropriate checklist items are accomplished in a timely manner and as recommended by the manufacturer, and performs recommended procedures.
(9) Maintains desired track and speed.
(10) Complies with instructions issued by ATC (or the examiner simulating ATC).
(11) Observes runway hold lines, localiser and glide slope critical areas, buoys, beacons, and other surface control markings and lighting.
(12) Maintains constant vigilance and aeroplane control during taxi operation to prevent runway/waterway incursion.
(13) Demonstrating and/or explaining procedural differences for night operations.
(14) Demonstrating and explaining the use(s) of aircraft exterior lighting and differences for day and night operations.

D. TASK: SAILING (AMES/ASES)

References: POH/AFM;
Objective: To determine that the applicant:
(1) Exhibits knowledge of the elements related to sailing by explaining the techniques used in this procedure.
(2) Recognises the circumstance when sailing should be used.
(3) Plans and follows the most favorable course considering wind, water current, obstructions, debris, and other vessels.
(4) Uses flight controls, flaps, doors, and water rudders, as appropriate, to follow the desired course.

E. TASK: SEAPLANE BASE/WATER LANDING SITE MARKINGS AND LIGHTING (AMES, ASES)

Objective: To determine that the applicant:

(1) Exhibits knowledge of the elements related to seaplane base/water landing site markings and lighting.
(2) Identifies and interprets seaplane base/water landing site markings and lighting.

F. TASK: PRE-TAKE-OFF CHECKS

References: SLCAR Part 1A; POH/AFM
Objective: To determine that the applicant:
(1) Exhibits satisfactory knowledge of the pre-take-off checks by stating the reason for checking the items outlined on the approved checklist and explaining how to detect possible malfunctions.
(2) Divides attention properly inside and outside cockpit.
(3) Ensures that all systems are within their normal operating range prior to beginning, during the performance of, and at the completion of those checks required by the approved checklist.
(4) Explains, as may be requested by the examiner, any normal or abnormal system-operating characteristic or limitation; and the corrective action for a specific malfunction.
(5) Determines if the aeroplane is safe for the proposed flight or requires maintenance.
(6) Determines the aeroplanes take-off performance, considering such factors as wind, density altitude, weight, temperature, pressure altitude, and runway/waterway condition and length.
(7) Determines airspeeds/V-speeds and properly sets all instrument references, configures flight director and autopilot controls, and navigation and communications equipment to properly fly the aircraft in accordance with the ATC clearance.
(8) Reviews procedures for emergency and abnormal situations, which may be encountered during take-off, and states the corrective action required of the pilot-in-command and other concerned crew members.
(9) Obtains and correctly interprets the take-off and departure clearance as issued by ATC.

III. AREA OF OPERATION: TAKE-OFF AND DEPARTURE PHASE

A. TASK: NORMAL AND CROSSWIND TAKE-OFF

References: SLCAR Part 1A; POH/AFM
Note: VMC manoeuvre.
Objective: To determine that the applicant:
(1) Exhibits knowledge of normal and crosswind take-offs and climbs including (as appropriate to the aeroplane) airspeeds, configurations, and emergency/abnormal procedures.
(2) Notes any surface conditions, obstructions, aircraft cleared for LAHSO, or other hazards that might hinder a safe take-off.
(3) Verifies and correctly applies correction for the existing wind component to the take-off performance.
(4) Coordinates with crew (if crew served aeroplane) to ensure completion or completes required checks prior to starting take-off to verify the expected powerplant performance. Performs or ensures all required pre-take-off checks as required by the appropriate checklist items are accomplished in a timely manner and as recommended by the manufacturer.
(5) Aligns the aeroplane on the runway centerline or clear of obstacles and vessels on waterways as appropriate.

(6) Applies the controls correctly to maintain longitudinal alignment on the centerline of the runway, if appropriate, prior to initiating and during the take-off.
(7) Adjusts the powerplant controls as recommended by the SLCAA-approved guidance for the existing conditions.
(8) Monitors powerplant controls, settings, and instruments during take-off to ensure all predetermined parameters are maintained.
(9) Adjusts the controls to attain the desired pitch attitude at the predetermined airspeed/Vspeed to attain the desired performance for the particular take-off segment.
(10) Performs the required pitch changes and, as appropriate, performs or calls for and verifies the accomplishment of, gear and flap retractions, power adjustments, and other required pilot related activities at the required airspeed/V-speeds within the tolerances established in the POH or AFM.
(11) Uses the applicable noise abatement and wake turbulence avoidance procedures, as required.
(12) Accomplishes, or calls for and verifies the accomplishment of, the appropriate checklist items in a timely manner and as recommended by the manufacturer.
(13) Maintains the appropriate climb segment airspeed/V-speeds.
(14) Maintains the desired heading, ±5°, and the desired airspeed (V-speed), ±5 knots (of the appropriate V speed range).

B. TASK: GLASSY WATER TAKE-OFF AND CLIMB (AMES/ASES)

References: POH/AFM

Note: If a glassy water condition does not exist, the applicant's satisfactory knowledge of glassy water elements must be evaluated through oral testing. The applicant's skill must be evaluated by simulating the TASK.

Objective: To determine that the applicant:

(1) Exhibits knowledge of the elements related to a glassy water take-off and climb.
(2) Positions the flight controls and flaps for the existing conditions.
(3) Clears the area, notes any surface hazards and/or vessels prior to selecting a take-off path.
(4) Retracts the water rudders, if applicable.
(5) Advances the throttles to take-off power.
(6) Avoids excessive water spray on the propellers.
(7) Establishes and maintains an appropriate planing attitude, directional control, and corrects for porpoising, skipping, and increases in water drag.
(8) Utilises appropriate techniques to lift seaplane from the water surface.
(9) Establishes proper attitude/airspeed, lifts off and accelerates to best single-engine climb speed or V_Y, whichever is greater, ±5 knots during the climb.
(10) Reduces the flaps after a positive rate-of-climb is established and at a safe altitude.
(11) Maintains take-off power to a safe manoeuvreing altitude, then sets climb power.
(12) Maintains directional control and proper wind-drift correction throughout take-off and climb.
(13) Uses noise abatement procedures, as required.
(14) Completes appropriate checklists or ensures all required checks as required by the appropriate checklist items are accomplished in a timely manner and as recommended by the manufacturer.

C. TASK: ROUGH WATER TAKE-OFF AND CLIMB (AMES/ASES)

References: POH/AFM

Note: If a rough water condition does not exist, the applicant's satisfactory knowledge of rough water elements must be evaluated through oral testing. The applicant's skill must be evaluated by simulating the TASK.

Objective: To determine that the applicant:

(1) Exhibits 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 the proper take-off path, considering wind, swells, surface hazards and/or vessels.
(4) Retracts the water rudders, if applicable.
(5) Advances the throttles to take-off power.
(6) Avoids excessive water spray on the propellers.
(7) Establishes and maintains an appropriate planing/lift-off attitude, directional control, and corrects for porpoising, skipping, or excessive bouncing.
(8) Establishes and maintains proper attitude to lift-off at minimum airspeed and accelerates to best single-engine climb speed or VY, whichever is greater, ±5 knots before leaving ground effect.
(9) Retracts the flaps after a positive rate-ofclimb is established and at a safe altitude.
(10) Maintains take-off power to a safe manoeuvreing altitude, then sets climb power.
(11) Maintains directional control and proper wind-drift correction throughout take-off and climb.
(12) Uses noise abatement procedures, as required.
(13) Completes appropriate checklists or coordinates with crew to ensure completion of checklist items in a timely manner and as recommended by the manufacturer.

D. TASK: CONFINED-AREA TAKE-OFF AND CLIMB (AMES/ASES)

References: POH/AFM

Note: This TASK simulates a take-off from a small pond, which would require a take-off and spiral climb; or a straight-ahead take-off and climb from a narrow waterway with obstructions at either end. The examiner must evaluate both take-off situations for this TASK. In multi-engine seaplanes with VX values within 5 knots of VMC, the use of VY or the manufacturers recommendation may be more appropriate for this demonstration.

Objective: To determine that the applicant:

(1) Exhibits knowledge of the elements related to a confined-area take-off and climb.
(2) Positions the flight controls and flaps for the existing conditions.
(3) Clears the area, notes any surface hazards, vessels, and/or obstructions prior to selecting a take-off path.
(4) Selects a take-off path that will allow maximum safe utilization of wind, water, and low terrain.
(5) Advances the throttles to take-off power.
(6) Ensures that the water rudders are retracted when no longer needed.
(7) Maintains the most efficient alignment and planing angle, without skidding, porpoising, and skipping.
(8) Lifts off at recommended airspeed and accelerates to manufacturer's recommended climb airspeed.
(9) Climbs at manufacturers recommended configuration and airspeed, or in their absence at VX, +5/-0 knots until the obstacle is cleared.

(10) After clearing all obstacles, accelerates to and maintains VY, ±5 knots, retracts flaps and maintains safe bank angles while turning and/or providing best terrain clearance.
(11) Maintains take-off power to a safe altitude, and then sets climb power.
(12) Uses noise abatement procedures, as required.
(13) Completes appropriate checklists or coordinates with crew to ensure completion of checklist items in a timely manner and as recommended by the manufacturer.

E. TASK: INSTRUMENT TAKE-OFF

References: SLCAR Part 1A; POH/AFM
Objective: To determine that the applicant:
(1) Exhibits knowledge of an instrument take-off with instrument meteorological conditions (IMC) simulated at or before reaching an altitude of 100 feet AGL. If accomplished in a flight simulator, visibility should be no greater than one-quarter (1/4) mile, or as specified by operator specifications, whichever is lower.
(2) Takes into account, prior to beginning the take-off, operational factors which could affect the manoeuvre, such as Take-off Warning Inhibit Systems or other aeroplane characteristics, runway length, surface conditions, wind, wake turbulence, icing conditions, obstructions, and other related factors that could adversely affect safety.
(3) Coordinates with crew, if a crew served aeroplane, or completes the appropriate checklist items in a timely manner and as recommended by the manufacturer in a single-pilot aeroplane, to ensure that the aeroplane systems applicable to the instrument take-off are operating properly.
(4) Sets the applicable avionics and flight instruments to the desired setting prior to initiating the take-off.
(5) Applies the controls correctly to maintain longitudinal alignment on the centerline of the runway, if appropriate, prior to initiating and during the take-off.
(6) Transitions smoothly and accurately from visual meteorological conditions (VMC) to actual or simulated instrument meteorological conditions (IMC).
(7) Maintains the appropriate climb attitude.
(8) Complies with the appropriate airspeeds/V-speeds and climb segment airspeeds.
(9) Maintains desired heading within ±5° and desired airspeeds within ±5 knots.
(10) Complies with ATC clearances and instructions issued by ATC (or the examiner simulating ATC).
(11) Acknowledges and makes appropriate callouts to coordinate with the crew, if in a crew served aeroplane.

F. TASK: POWERPLANT FAILURE DURING TAKE-OFF

Note: In a multi-engine aeroplane certificated under SLCARs with published V1, VR, and/or V2 speeds, the failure of the most critical powerplant should be simulated at a point:
(1) After V1 and prior to V2, if in the opinion of the examiner, it is appropriate under the prevailing conditions; or
(2) As close as possible after V1 when V1 and V2 or V1 and VR are identical.
In a multi-engine aeroplane certificated under SLCARs the failure of the most critical powerplant should be simulated at a point after reaching a minimum of VSSE and, if accomplished in the aircraft, at an altitude not lower than 400 feet AGL, giving consideration to local atmospheric conditions, terrain, and aircraft

performance available. In a simulator, there are no limitations on powerplant failures in either aeroplane by certification basis.

APPLICANT NOTE: Expect this task to be combined with normal Task A, and/or Task E at examiner's discretion.

References: SLCAR Part 1A; POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the procedures used during powerplant failure on takeoff, the appropriate reference airspeeds, and the specific pilot actions required.

(2) Takes into account, prior to beginning the take-off, operational factors which could affect the manoeuvre, such as Take-off Warning Inhibit Systems or other aeroplane characteristics, runway length, surface conditions, wind, wake turbulence, visibility, precipitation, obstructions, and other related factors that could adversely affect safety.

(3) Completes required checks prior to starting take-off to verify the expected powerplant performance. Performs all required pre-take-off checks as required by the appropriate checklist items or coordinates with crew to ensure completion of checklist items in a timely manner and as recommended by the manufacturer.

(4) Aligns the aeroplane on the runway/waterway.

(5) Applies the controls correctly to maintain longitudinal alignment on the centerline of the runway, if appropriate, prior to initiating and during the take-off.

(6) Adjusts the powerplant controls as recommended by the SLCAA-approved guidance for the existing conditions.

(7) Single-engine aeroplanes – establishes a power-off descent approximately straight-ahead, if the powerplant failure occurs after becoming airborne and before reaching an altitude where a safe turn can be made.

(8) Continues the take-off if the (simulated) powerplant failure occurs at a point where the aeroplane can continue to a specified airspeed and altitude at the end of the runway commensurate with the aeroplane's performance capabilities and operating limitations.

(9) Maintains (in a multi-engine aeroplane), after a simulated powerplant failure and after a climb has been established, the desired heading within ±5°, desired airspeed within ±5 knots, and, if appropriate for the aeroplane, establishes a bank of approximately 5°, or as recommended by the manufacturer, towards the operating powerplant.

(10) Maintains the aeroplane alignment with the heading appropriate for climb performance and terrain clearance when powerplant failure occurs.

(11) Acknowledges and makes appropriate callouts to crew, if in crew served aircraft.

G. TASK: REJECTED TAKE-OFF

References: SLCAR Part 1A, POH/AFM

Objective: To determine that the applicant understands when to reject or continue the take-off and:

(1) Exhibits satisfactory knowledge of the technique and procedure for accomplishing a rejected take-off after powerplant/system(s) failure/warnings, including related safety factors.

(2) Takes into account, prior to beginning the take-off, operational factors, which could affect the manoeuvre, such as Take-off Warning Inhibit Systems or other aeroplane characteristics, runway length, surface conditions, wind, visibility,

precipitation, obstructions, and aircraft cleared for LAHSO that could affect take-off performance and could adversely affect safety.

(3) Aligns the aeroplane on the runway centerline or clear of obstacles and vessels on waterways.

(4) Performs all required pre-take-off checks as required by the appropriate checklist items or coordinates with crew to ensure completion of checklist items in a timely manner and as recommended by the manufacturer.

(5) Adjusts the powerplant controls as recommended by the SLCAA-approved guidance for the existing conditions.

(6) Applies the controls correctly to maintain longitudinal alignment on the centerline of the runway.

(7) Aborts the take-off if, in a single-engine aeroplane the powerplant failure occurs prior to becoming airborne, or in a multi-engine aeroplane, the powerplant failure occurs at a point during the take-off where the abort procedure can be initiated and the aeroplane can be safely stopped on the remaining runway/stopway. If a flight simulator is not used, the powerplant failure must be simulated before reaching 50 percent of VMC.

(8) Reduces the power smoothly and promptly, if appropriate to the aeroplane, when powerplant failure is recognised.

(9) Uses spoilers, prop reverse, thrust reverse, wheel brakes, and other drag/braking devices, as appropriate, maintaining positive control in such a manner as to bring the aeroplane to a safe stop.

(10) Accomplishes the appropriate powerplant failure or other procedures and/or checklists or coordinates with crew to ensure completion of checklist items in a timely manner and as recommended by the manufacturer, as set forth in the POH or AFM.

H. TASK: DEPARTURE PROCEDURES

References: SLCAR Part 1A, POH/AFM

Objective: To determine that the applicant:

(1) In actual or simulated instrument conditions, exhibits satisfactory knowledge of DPs, En Route Low and High Altitude Charts, FMSP, and related pilot/controller responsibilities.

(2) Uses the current and appropriate navigation publications for the proposed flight.

(3) Selects, configures, and uses the appropriate communications frequencies, navigation and systems displays; selects and identifies the navigation aids and routes necessary to properly fly the assigned ATC clearance.

(4) Coordinates with crew in crew served aircraft to ensure performance of, or performs the appropriate checklist items in a timely manner and as recommended by the manufacturer.

(5) Establishes communications with ATC, using proper phraseology and advises ATC when unable to comply with a clearance or restriction.

(6) Complies, in a timely manner, with all instructions and airspace restrictions.

(7) Exhibits adequate knowledge of two-way radio communications failure procedures.

(8) Intercepts, in a timely manner, all courses, radials, and bearings appropriate to the procedure, route, clearance, or as directed by the examiner.

(9) Maintains the appropriate airspeed within ±10 knots, headings within ±10°, altitude within ±100 feet; and accurately tracks a course, radial, or bearing.

(10) Conducts the departure phase to a point where, in the opinion of the examiner, the transition to the en route environment is complete.

IV. AREA OF OPERATION: IN-FLIGHT MANOEUVRES

A. TASK: STEEP TURNS

References: SLCAR Part 1A; POH/AFM

Objective: To determine that the applicant:

(1) In actual or simulated instrument conditions, exhibits knowledge of steep turns (if applicable to the aeroplane) and the factors associated with performance; and, if applicable, wing loading, angle of bank, stall speed, pitch, power requirements, and overbanking tendencies.

(2) Selects an altitude recommended by the manufacturer, training syllabus, or other training directive, but in no case lower than 3,000 feet AGL.

(3) Establishes the recommended entry airspeed.

(4) Rolls into a coordinated turn of 180° or 360° with a bank of at least 45°. Maintains the bank angle within ±5° while in smooth, stabilised flight.

(5) Applies smooth coordinated pitch, bank, and power to maintain the specified altitude within ±100 feet and the desired airspeed within ±10 knots.

(6) Rolls out of the turn (at approximately the same rate as used to roll into the turn) within ±10° of the entry or specified heading, stabilises the aeroplane in a straight-and-level attitude or, at the discretion of the examiner, reverses the direction of turn and repeats the manoeuvre in the opposite direction.

(7) Avoids any indication of an approaching stall, abnormal flight attitude, or exceeding any structural or operating limitation during any part of the manoeuvre.

B. TASK: APPROACHES TO STALLS AND STALL RECOVERY

References: SLCAR Part 1A; POH/AFM

THREE approaches to stall are required, as follows (unless otherwise specified by the FSB Report):

(1) One in the take-off configuration (except where the aeroplane uses only zero-flap take-off configuration) or approach (partial) flap configuration.

(2) One in a clean cruise configuration.

(3) One in a landing configuration (landing gear and landing flaps set).
CAUTION: Avoid deep stalls which are termed as "virtually unrecoverable" in aeroplanes, and "tip stalls" in swept wing aeroplanes. One of these approaches to a stall must be accomplished while in a turn using a bank angle of 15 to 30°.

Objective: To determine that the applicant:

Note: When published, the aircraft manufacturers procedures for the specific make/model/series aeroplane take precedent over the identification and recovery actions herein. One of these approaches to a stall must be accomplished while in a turn with a bank angle of 15 to 30. If installed, one of these approaches to a stall should be accomplished by commands to the autopilot.

(1) In actual or simulated instrument conditions exhibits satisfactory knowledge of the factors, which influence stall characteristics, including the use of various drag configurations, power settings, pitch attitudes, weights, and bank angles. Also, exhibits adequate knowledge of the proper procedure for resuming normal flight.

(2) If accomplished in an aeroplane, selects an entry altitude that is in accordance with the AFM or POH, but in no case lower than an altitude that will allow recovery to be safely completed at a minimum of 3,000 feet AGL for non-transport certificated aeroplanes and 5.000 feet for transport certificated

aeroplanes.. When accomplished in an FSTD, the entry altitude should be consistent with expected operational environment for the stall configuration with no minimum entry altitude defined.

(3) Observes the area is clear of other aircraft prior to accomplishing an approach to a stall.

(4) While maintaining the briefed profile, either manually or with the autopilot engaged, smoothly adjust pitch attitude bank angle, and power setting that will induce a stall.

(5) Announces the first indication of an impending stall (such as buffeting, stick shaker, decay of control effectiveness, and any other cues related to the specific aeroplane design characteristics) and promptly initiates recovery by disconnecting autopilot, reducing the angle of attack, leveling the wings, increasing power as necessary, and retracting any speed brakes/spoilers to effect a safe and timely recovery.

Note: If accomplished in an aeroplane in actual flight, the power should be set in accordance with the evaluators instructions, when a limitation of power application is prudent for operational considerations and safety is not impaired.

(6) Regains control of the aeroplane and recovers to maneuvering speed and fight path appropriate for the aeroplane's configuration without exceeding the aeroplane's limitations or losing excessive altitude consistent with the aeroplane's performance capabilities. This should include reducing pitch attitude as necessary, reducing bank angle and adding power (no particular order implied!) to recover to missed approach or cruise configuration, airspeed and altitude. Some altitude loss is expected during the recovery, but reestablishment of controlled flight is paramount

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. Valid evaluation criteria (such as density altitude) and internal variables (i.e. Aeroplane mass, drag configuration and powerplant response time) which affect the recovery altitude.

(7) Demonstrates smooth, positive control during entry, approach to a stall, and recovery.

C. TASK: POWERPLANT FAILURE – MULTI-ENGINE AEROPLANE

References: SLCAR Part 1A ; POH/AFM

Note: The feathering of one propeller and engine shutdown must be demonstrated in any multiengine aeroplane (or simulator/qualified FSTD) equipped with propellers (includes turboprop), unless the aeroplane is an exception by the type rating and aeroplane certification (see paragraph 1.5 of this STS. The propeller must be safely feathered and unfeathered while airborne. In a multiengine jet aeroplane (or simulator/qualified FSTD), one engine must be shut down and a restart must be demonstrated while airborne. Feathering or shutdown should be performed only under conditions and at such altitudes (no lower than 3,000 feet AGL) and in a position where a safe landing can be made on an established aerodrome in the event difficulty is encountered in unfeathering the propeller or restarting the engine. At an altitude lower than 3,000 feet AGL, simulated engine failure will be performed by setting the powerplant controls to simulate zero thrust. In the event the propeller cannot be unfeathered or the engine air started during the test, it should be treated as an emergency.

When authorised and conducted in a flight simulator, feathering or shutdown may be performed in conjunction with any procedure or manoeuvre and at locations and altitudes at the discretion of the examiner. However, when conducted in an FSTD, authorisations are limited to shutdown, feathering, restart, and/or unfeathering procedures only. See appendix 1.

Objective: To determine that the applicant:

(1) Exhibits knowledge of the flight characteristics and controllability associated with manoeuvreing with powerplant(s) inoperative (as appropriate to the aeroplane).

(2) Maintains positive aeroplane control. Establishes a bank of approximately 5°, if required, or as recommended by the manufacturer, to maintain coordinated flight, and properly trims for that condition.

(3) Sets powerplant controls, reduces drag as necessary, correctly identifies and verifies the inoperative powerplant(s) after the failure (or simulated failure).

(4) Maintains the operating powerplant(s) within acceptable operating limits.

(5) Follows the prescribed aeroplane checklist or coordinates with crew to ensure completion of checklist items in a timely manner and as recommended by the manufacturer, and verifies the procedures for securing the inoperative powerplant(s).

(6) Determines the cause for the powerplant(s) failure and if a restart is a viable option.

(7) Maintains desired altitude within ±100 feet, when a constant altitude is specified and is within the capability of the aeroplane.

(8) Maintains the desired airspeed within ±10 knots.

(9) Maintains the desired heading within ±10° of the specified heading.

(10) Demonstrates proper powerplant restart procedures (if appropriate) in accordance with SLCAA-approved procedure/checklist or the manufacturer's recommended procedures and pertinent checklist items.

D. TASK: POWERPLANT FAILURE – SINGLE–ENGINE AEROPLANE

References: SLCAR Part 1A; POH/AFM

Note: No simulated powerplant failure will be given by the examiner in an aeroplane when an actual touchdown cannot be safely completed, should it become necessary.

Objective: To determine that the applicant:

(1) Exhibits knowledge of the flight characteristics, approach and forced (emergency) landing procedures, and related procedures to use in the event of a powerplant failure (as appropriate to the aeroplane).

(2) Maintains positive control throughout the manoeuvre.

(3) Establishes and maintains the recommended best glide airspeed, ±5 knots, and configuration during a simulated powerplant failure.

(4) Selects a suitable aerodrome or landing area, which is within the performance capability of the aeroplane.

(5) Establishes a proper flight pattern to the selected aerodrome or landing area, taking into account altitude, wind, terrain, obstructions, and other pertinent operational factors.

(6) Follows the emergency checklist items appropriate to the aeroplane to ensure completion of checklist items in a timely manner and as recommended by the manufacturer.

(7) Determines the cause for the simulated powerplant failure (if altitude permits) and if a restart is a viable option.
(8) Uses configuration devices, such as landing gear and flaps in a manner recommended by the manufacturer and/or approved by the SLCAA.

E. TASK: SPECIFIC FLIGHT CHARACTERISTICS

References: SLCAR Part 1A; POH/AFM
Objective: To determine that the applicant:
(1) Exhibits satisfactory knowledge of specific flight characteristics appropriate to the specific aeroplane, as identified by FSB Reports, such as Dutch Rolls for certain aircraft.
(2) Uses proper technique to enter into, operate within, and recover from specific flight situations.

F. TASK: RECOVERY FROM UNUSUAL ATTITUDES

References: SLCAR Part 1A; POH; AFM
Objective: To determine that the applicant:
(1) Exhibits knowledge of recovery from unusual attitudes.
(2) Recovers from nose-high banked and/or level unusual attitudes, using proper pitch, bank, and power techniques.
(3) Recovers from nose-low banked and/or level unusual attitudes, using proper pitch, bank, and power techniques.

V. AREA OF OPERATION: INSTRUMENT PROCEDURES

Note: TASKS B through F are not required if the applicant holds a private pilot or commercial pilot licence and is seeking a type rating limited to VFR.

A. TASK: STANDARD TERMINAL ARRIVAL/FLIGHT MANAGEMENT SYSTEM PROCEDURES

References: SLCAR Part 1A; POH/AFM
Objective: To determine that the applicant:
(1) In actual or simulated instrument conditions, exhibits adequate knowledge of En Route Low and High Altitude Charts, STARs/FMSPs, Instrument Approach Procedure Charts (IAP), and related pilot and controller responsibilities.
(2) Uses the current and appropriate navigation publications for the proposed flight.
(3) Selects and correctly identifies all instrument references, flight director and autopilot controls, displays, and navigation and communications equipment associated with the arrival.
(4) Performs the aeroplane checklist items or coordinates with crew to ensure completion of checklist items appropriate to the arrival in a timely manner and as recommended by the manufacturer.
(5) Establishes communications with ATC, using proper phraseology.
(6) Complies, in a timely manner, with all ATC clearances, instructions, and restrictions. Advises ATC if unable to comply with ATC clearances or instructions.
(7) Exhibits satisfactory knowledge of two-way communications failure procedures.
(8) Intercepts, in a timely manner, all courses, radials, and bearings appropriate to the procedure, route, ATC clearance, or as directed by the examiner.
(9) Adheres to airspeed restrictions and adjustments required by regulations, ATC, the POH, the AFM, or the examiner.

(10) Establishes, where appropriate, a rate of descent consistent with the aeroplane operating characteristics and safety.
(11) Maintains the appropriate airspeed/V-speed within ±10 knots, but not less than Vref, if applicable; heading ±10°; altitude within ±100 feet; and accurately tracks radials, courses, and bearings.
(12) Complies with the provisions of the Profile Descent, STAR, and other arrival procedures, as appropriate.

B. TASK: HOLDING
References: SLCAR Part 1A; POH/AFM
Objective: To determine that the applicant:
(1) In actual or simulated instrument conditions, exhibits knowledge of holding procedures for standard and non-standard, published and non-published holding patterns. If appropriate, demonstrates satisfactory knowledge of holding endurance, including, but not necessarily limited to, fuel on board, fuel flow while holding, fuel required to alternate, etc.
(2) Changes to the recommended holding airspeed appropriate for the aeroplane and holding altitude, so as to cross the holding fix at or below maximum holding airspeed.
(3) Recognises arrival at the clearance limit or holding fix.
(4) Follows appropriate entry procedures for a standard, non-standard, published, or no published holding pattern.
(5) Complies with ATC reporting requirements.
(6) Uses the proper timing criteria required by the holding altitude and ATC or examiner's instructions.
(7) Complies with the holding pattern leg length when a distance measuring equipment (DME) distance is specified.
(8) Uses the proper wind-drift correction techniques to accurately maintain the desired radial, track, courses, or bearing.
(9) Arrives over the holding fix as close as possible to the "expect further clearance" time.
(10) Maintains the appropriate airspeed/V-speed within ±10 knots, altitude within ±100 feet, headings within ±10°; and accurately tracks radials, courses, and bearings.
(11) Selects and correctly identifies required instrument navigation aids, flight director and autopilot controls, navigation equipment displays associated with the holding clearance and expected clearance, as appropriate.

C. TASK: PRECISION APPROACHES (PA)
References: SLCAR Part 1A; POH/AFM
Note: Two precision approaches, utilizing NAVAID equipment for centerline and glideslope guidance, must be accomplished in simulated or actual instrument conditions to DA/DH. At least one approach must be flown manually without the use of an autopilot. The second approach may be flown via the autopilot, if appropriate, and if the DA/DH altitude does not violate the authorised minimum altitude for autopilot operation. Manually flown precision approaches may use raw data displays or may be flight director assisted, at the discretion of the examiner.
If the aircraft is equipped with advanced flight instrument displays, the raw data approach should be flown by reference to the backup instrumentation as much as is possible with the aeroplane's configuration.

For multi-engine aeroplanes at least one manually controlled precision approach must be accomplished with a simulated failure of one powerplant. The simulated powerplant failure should occur before initiating the final approach segment and must continue to touchdown or throughout the missed approach procedure. As the markings on localiser/glideslope indicators vary, a one quarter scale deflection of either the localiser, or glide slope indicator is when it is displaced one fourth of the distance that it may be deflected from the on glide slope or on localiser position.

Note: A stabilised approach is characterised by a constant angle, constant rate of descent approach profile ending near the touchdown point, where the landing manoeuvre begins.

Note: If the installed equipment and data base is current and qualified for IFR flight and LPV approaches, an LPV approach can be flown to demonstrate precision approach proficiency if the LPV DA is equal to or less than 300 feet HAT.

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the precision instrument approach procedures with all engines operating, and with one engine inoperative.

(2) Accomplishes the appropriate precision instrument approaches as selected by the examiner.

(3) Establishes two-way communications with ATC using the proper communications phraseology and techniques, or, directs co-pilot/safety pilot to do so, as appropriate for the phase of flight or approach segment.

(4) Complies, in a timely manner, with all clearances, instructions, and procedures.

(5) Advises ATC anytime the applicant is unable to comply with a clearance.

(6) Establishes the appropriate aeroplane configuration and airspeed/V-speed considering turbulence, wind shear, microburst conditions, or other meteorological and operating conditions.

(7) Completes the aeroplane checklist items or coordinates with crew to ensure completion of checklist items in a timely manner and as recommended by the manufacturer, appropriate to the phase of flight or approach segment, including engine out approach and landing checklists, if appropriate.

(8) Prior to beginning the final approach segment, maintains the desired altitude ±100 feet, the desired airspeed within ±10 knots, the desired heading within ±5°; and accurately tracks radials, courses, and bearings.

(9) Selects, tunes, identifies, and monitors the operational status of ground and aeroplane navigation equipment used for the approach, or correctly programmes and monitors the RNAV equipment to display the proper course/track.

(10) Applies the necessary adjustments to the published DA/DH and visibility criteria for the aeroplane approach category as required, such as:

(a) Notices to Airmen, including Flight Data Centre (FDC) Procedural NOTAMs

(b) Inoperative aeroplane and ground navigation equipment

(c) Inoperative visual aids associated with the landing environment

(d) National Weather Service (NWS) reporting factors and criteria

(11) Establishes a predetermined rate of descent at the point where the electronic glideslope begins, which approximates that required for the aeroplane to follow the glideslope.

(12) Maintains a stabilised final approach, from the precision final approach fix to DA/DH, allowing no more than one-quarter scale deflection of either the glideslope or localiser indications, and maintains the desired airspeed within ±5 knots.

(13) A missed approach or transition to a landing must be initiated at DA/DH.

(14) Immediately initiates and executes the missed approach when at the DA/DH, if the required visual references for the runway are not unmistakably visible and identifiable.

(15) Transitions to a normal landing approach (missed approach for seaplanes) only when the aeroplane is in a position from which a descent to a landing on the runway can be made at a normal rate of descent using normal manoeuvreing.

(16) Maintains localiser and glide slope within one-quarter-scale deflection of the indicators during the visual descent from DA/DH to a point over the runway where the glideslope must be abandoned to accomplish a normal landing.

D. TASK: NON-PRECISION APPROACHES (NPA)

References: SLCAR Part 1A; POH/AFM

Note: The applicant must accomplish at least two non-precision approaches (one of which must include a procedure turn or, in the case of an RNAV approach, a Terminal Arrival Area (TAA) procedure) in simulated or actual weather conditions. At least one non-precision approach must be flown without the use of autopilot and without the assistance of radar vectors. (The yaw damper and flight director are not considered parts of the autopilot for purpose of this part). The examiner will select non-precision approaches that are representative of the type that the applicant is likely to use. The choices must utilise two different types of navigational aids. Some examples of navigational aids for the purpose of this part are: NDB, VOR, LOC, LDA, GPS, or RNAV.

Note: One approach should be flown with reference to backup or "fail down" instrumentation or navigation display depending on the aircrafts avionics configuration.

Note: The requirements for conducting a GPS approach for the purpose of this test are explained on pages 13 and 14 of the Introduction.

Objective: To determine that the applicant:

(1) Exhibits adequate knowledge of non-precision approach procedures representative of those the applicant is likely to use.

(2) Accomplishes the non-precision instrument approaches selected by the examiner.

(3) Establishes two-way communications with ATC as appropriate to the phase of flight or approach segment and uses proper communications phraseology and techniques.

(4) Complies with all clearances issued by ATC.

(5) Advises ATC or the examiner any time the applicant is unable to comply with a clearance.

(6) Establishes the appropriate aeroplane configuration and airspeed, and completes all applicable checklist items or coordinates with crew to ensure completion of checklist items in a timely manner and as recommended by the manufacturer.

(7) Maintains, prior to beginning the final approach segment, the desired altitude ±100 feet, the desired airspeed ±10 knots, the desired heading ±5°; and accurately tracks radials, courses, and bearings.

(8) Selects, tunes, identifies, and monitors the operational status of ground and aeroplane navigation equipment used for the approach.

(9) Applies the necessary adjustments to the published Minimum Descent Altitude (MDA) and visibility criteria for the aeroplane approach category when required, such as:

(a) Notices to Airmen, including Flight Data Centre Procedural NOTAMs

(b) Inoperative aeroplane and ground navigation equipment

(c) Inoperative visual aids associated with the landing environment
(d) National Weather Service (NWS) reporting factors and criteria

(10) Establishes a rate of descent that will ensure arrival at the MDA (at, or prior to reaching, the visual descent point (VDP), if published) with the aeroplane in a position from which a descent from MDA to a landing on the intended runway can be made at a normal rate using normal manoeuvreing.

(11) Allows, while on the final approach segment, not more than quarter-scale deflection of the Course Deviation Indicator (CDI) or ±5° in the case of the RMI or bearing pointer, and maintains airspeed within ±5 knots of that desired.

(12) Maintains the MDA, when reached, within −0, +50 feet to the missed approach point.

(13) Executes the missed approach at the missed approach point if the required visual references for the intended runway are not unmistakably visible and identifiable at the missed approach point.

(14) Executes a normal landing from a straight-in or circling approach when instructed by the examiner.

E. TASK: CIRCLING APPROACH

References: SLCAR Part 1A; POH/AFM

APPLICANT NOTE: Expect this task to be combined with other tasks to include Area VI, Task C.

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of circling approach categories, speeds, and procedures to a specified runway.

(2) In simulated or actual instrument conditions to MDA, accomplishes the circling approach selected by the examiner.

(3) Demonstrates sound judgement and knowledge of the aeroplane manoeuvreing capabilities throughout the circling approach.

(4) Confirms the direction of traffic and adheres to all restrictions and instructions issued by ATC.

(5) Descends at a rate that ensures arrival at the MDA at, or prior to, a point from which a normal circle-to-land manoeuvre can be accomplished.

(6) Avoids descent below the appropriate circling MDA or exceeding the visibility criteria until in a position from which a descent to a normal landing can be made.

(7) Manoeuvres the aeroplane, after reaching the authorised circling approach altitude, by visual references to maintain a flightpath that permits a normal landing on a runway that requires at least a 90° change of direction, from the final approach course, to align the aircraft for landing.

(8) Performs the procedure without excessive manoeuvreing and without exceeding the normal operating limits of the aeroplane (the angle of bank should not exceed 30°).

(9) Maintains the desired altitude within −0, +100 feet, heading/ track within ±5°, the airspeed/V-speed within ±5 knots, but not less than the airspeed as specified in the POH or the AFM.

(10) Uses the appropriate aeroplane configuration for normal and abnormal situations and procedures.

(11) Turns in the appropriate direction, when a missed approach is dictated during the circling approach, and uses the correct procedure and aeroplane configuration.

(12) Performs all procedures required for the circling approach and aeroplane control in a smooth, positive, and timely manner.

F. TASK: MISSED APPROACH

References: SLCAR Part 1A; POH/AFM

Note: The applicant must perform two missed approaches with one being from a precision approach (ILS, MLS, or GLS). One complete published missed approach must be accomplished. Additionally, in multi-engine aeroplanes, a missed approach must be accomplished with one engine inoperative (or simulated inoperative). The engine failure may be experienced any time prior to the initiation of the approach, during the approach, or during the transition to the missed approach attitude and configuration.

Descending below the MDA or continuing a precision approach below DH/DA as appropriate, unless the runway environment is in sight is considered unsatisfactory performance. However, even if the missed approach is properly initiated at DA/DH, most aeroplanes descend below DA/DH because of the momentum of the aeroplane transitioning from a stabilised approach to a missed approach. This descent below DA/DH is not considered unsatisfactory, as long as the precision approach was not continued below DA/DH.

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of missed approach procedures associated with standard instrument approaches to include reference to standby (backup or fail down) instruments.

(2) Initiates the missed approach procedure promptly by the timely application of power, establishes the proper climb attitude, and reduces drag in accordance with the approved procedures.

(3) Reports to ATC, beginning the missed approach procedure.

(4) Complies with the appropriate missed approach procedure or ATC clearance.

(5) Advises ATC any time the applicant is unable to manoeuvre the aeroplane to comply with a clearance.

(6) Follows the recommended aeroplane checklist items or coordinates with crew to ensure completion of checklist items in a timely manner and as recommended by the manufacturer appropriate to the go-around procedure for the aeroplane used.

(7) Requests clearance, if appropriate, to the alternate aerodrome, another approach, a holding fix, or as directed by the examiner.

(8) Maintains the desired altitudes ±100 feet, airspeed ±5 knots, heading ±5°; and accurately tracks courses, radials, and bearings.

VI. AREA OF OPERATION: LANDINGS AND APPROACHES TO LANDINGS

Note: Notwithstanding the authorisations for the combining of manoeuvres and for the waiver of manoeuvres, the applicant must make at least three actual landings (one to a full stop). These landings must include the types listed in this AREA OF OPERATION; however, more than one type may be combined where appropriate (i.e., crosswind and landing from a precision approach or landing with simulated powerplant failure, etc.). For all landings, touchdown should be 500 to 3,000 feet past the runway threshold, not to exceed one-third of the runway length, with the runway centerline between the main landing gear. An amphibian type rating must bear the limitation "LIMITED TO LAND" or "LIMITED TO SEA," as appropriate, unless the applicant demonstrates proficiency in both land and sea operations.

A. TASK: NORMAL AND CROSSWIND APPROACHES AND LANDINGS

Note: Notwithstanding the authorisations for the combining of manoeuvers and for the waiver of manoeuvers, the applicant must make at least three actual landings (one to a

full stop). These landings must include the types listed in this Area of Operation; however, more than one type may be combined where appropriate (i.e. crosswind and landing from a precision approach or landing with simulated powerplant failure, etc.). For all landings, touch down at the aiming point markings –
250' to +500' or where there are no runway threshold of the runway. Deceleration to taxi speed (20 knots or less on dry pavement, 10 knots or less on contaminated pavement) should be demonstrated on at least one landing to within the calculated landing distance plus 25% for the actual conditions with the runway centerline between main landing gear. At no time will the outcome of the rollout and subsequent taxi be in doubt. Go-arounds will incur no penalty if successful. "successful" is defined as no surface contact except for the landing gear on the runway.
An amphibian type rating must bear the limitation "Limited to Land" or "Limited to Sea," as appropriate, unless the applicant demonstrates proficiency in both land and sea operations.

References: SLCAR Part 1A; POH/AFM

Note: In an aeroplane with a single powerplant, unless the applicant holds a commercial pilot certificate, he or she must accomplish three accuracy approaches and spot landings from an altitude of 1,000 feet or less, with the engine power lever in idle and 180° of change in direction.
The aeroplane must touch the ground in a normal landing attitude beyond and within 200 feet of a designated line or point on the runway. At least one landing must be from a forward slip.

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of normal and crosswind approaches and landings including recommended approach angles, airspeeds, V-speeds, configurations, performance limitations, wake turbulence, LAHSO, and safety factors (as appropriate to the aeroplane).

(2) Establishes the approach and landing configuration appropriate for the runway and meteorological conditions, and adjusts the powerplant controls as required.

(3) Maintains a ground track that ensures the desired traffic pattern will be flown, taking into account any obstructions and ATC or examiner instructions.

(4) Verifies existing wind conditions, makes proper correction for drift, and maintains a precise ground track.

B. TASK: LANDING FROM A PRECISION APPROACH

References: SLCAR Part 1A; POH/AFM

Note: If circumstances beyond the control of the applicant prevent an actual landing, the examiner may accept an approach to a point where, in his or her judgement, a safe landing and a full stop could have been made, and credit given for a missed approach. Where a simulator approved for landing from a precision approach is used, the approach may be continued through the landing and credit given for one of the landings required by this AREA OF OPERATION.

APPLICANT NOTE: Expect other tasks to be combined with this task (to include Area VI, Task C for multi-engine aeroplanes).

Objective: To determine that the applicant:

(1) Exhibits awareness of landing in sequence from a precision approach.

(2) Considers factors to be applied to the approach and landing such as displaced thresholds, meteorological conditions, NOTAMs, and ATC or examiner instructions.

(3) Uses the aeroplane configuration and airspeed/V-speeds, as appropriate.

(4) Maintains, during the final approach segment, glide slope and localiser indications within applicable standards of deviation, and the recommended airspeed/V-speed ±5 knots.

(5) Applies gust/wind factors as recommended by the manufacturer, and takes into account meteorological phenomena such as wind shear, microburst, and other related safety of flight factors.

(6) Accomplishes the appropriate checklist items or coordinates with crew to ensure timely completion of checklist items in a timely manner and as recommended by the manufacturer or approved method.

(7) Transitions smoothly from simulated instrument meteorological conditions (IMC) at a point designated by the examiner, maintaining positive aeroplane control.

(8) Accomplishes a smooth, positively controlled transition from final approach to touchdown.

(9) Maintains positive directional control and crosswind correction during the after-landing roll.

(10) Uses spoilers, prop reverse, thrust reverse, wheel brakes, and other drag/braking devices, as appropriate, in such a manner to bring the aeroplane to a safe stop after landing.

(11) Accomplishes the appropriate after-landing checklist items or coordinates with crew to ensure completion of after-landing checklist items in a timely manner and as recommended by the manufacturer.

C. TASK: APPROACH AND LANDING WITH (SIMULATED) POWERPLANT FAILURE – MULTIENGINE AEROPLANE

References: SLCAR Part 1A; POH/AFM

Note: In aeroplanes with three powerplants, the applicant must follow a procedure (if approved) that approximates the loss of two powerplants, the centre and one outboard powerplant. In other multi-engine aeroplanes, the applicant must follow a procedure, which simulates the loss of 50 percent of available powerplants, the loss being simulated on one side of the aeroplane.

APPLICANT NOTE: Expect task to be combined with other tasks (to include Area V, Task E). May be limited by aircraft parameters under ambient conditions at examiner's discretion.

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the flight characteristics and controllability associated with manoeuvreing to a landing with powerplant(s) inoperative (or simulated inoperative) including the controllability factors associated with manoeuvreing, and the applicable emergency procedures.

(2) Maintains positive aeroplane control. Establishes a bank of approximately 5°, if required, or as recommended by the manufacturer, to maintain coordinated flight, and properly trims for that condition.

(3) Sets powerplant controls, reduces drag as necessary, correctly identifies and verifies the inoperative powerplant(s) after the failure (or simulated failure).

(4) Maintains the operating powerplant(s) within acceptable operating limits.

(5) Follows the prescribed aeroplane checklist or coordinates with crew to ensure timely completion of checklist items in a timely manner and as recommended by the manufacturer, and verifies the procedures for securing the inoperative powerplant(s).

(6) Proceeds towards the nearest suitable aerodrome.

(7) Maintains, prior to beginning the final approach segment, the desired altitude ±100 feet, the desired airspeed ±10 knots, the desired heading ±5°; and accurately tracks courses, radials, and bearings.
(8) Establishes the approach and landing configuration appropriate for the runway or landing area, and meteorological conditions; and adjusts the powerplant controls as required.
(9) Maintains a stabilised approach and the desired airspeed/V-speed within ±5 knots.
(10) Accomplishes a smooth, positively controlled transition from final approach to touchdown.
(11) Maintains positive directional control and crosswind corrections during the after-landing roll.
(12) Uses spoilers, prop reverse, thrust reversers, wheel brakes, and other drag/braking devices, as appropriate, in such a manner to bring the aeroplane to a safe stop after landing.
(13) Accomplishes the appropriate after-landing checklist items or coordinates with crew to ensure completion of after-landing checklist items in a timely manner and as recommended by the manufacturer.

D. TASK: LANDING FROM A CIRCLING APPROACH

References: SLCAR Part 1A; POH/AFM

APPLICANT NOTE: Expect task to be combined with other tasks (to include previous task, Task C for multi-engine aircraft.)

Objective: To determine that the applicant:

(1) Exhibits knowledge of a landing from a circling approach.
(2) Selects, and complies with, a circling approach procedure to a specified runway.
(3) Considers the environmental, operational, and meteorological factors, which affect a landing from a circling approach.
(4) Confirms the direction of traffic and adheres to all restrictions and instructions issued by ATC.
(5) Descends at a rate that ensures arrival at the MDA at, or prior to, a point from which a normal circle-to-land manoeuvre can be accomplished.
(6) Avoids descent below the appropriate circling MDA or exceeding the visibility criteria until in a position from which a descent to a normal landing can be made.
(7) Accomplishes the appropriate checklist items or coordinates with crew to ensure completion of checklist items in a timely manner and as recommended by the manufacturer or approved method.
(8) Manoeuvres the aeroplane, after reaching the authorised circling approach altitude, by visual references, to maintain a flightpath that requires at least a 90° change of direction, from the final approach course, to align the aircraft for landing.
(9) Performs the manoeuvre without excessive manoeuvreing and without exceeding the normal operating limits of the aeroplane. The angle of bank should not exceed 30°.
(10) Maintains the desired altitude within +100, −0 feet, heading within ±5°, and approach airspeed/V-speed within ±5 knots.
(11) Uses the appropriate aeroplane configuration for normal and abnormal situations and procedures.
(12) Performs all procedures required for the circling approach and aeroplane control in a timely, smooth, and positive manner.

(13) Accomplishes a smooth, positively controlled transition to final approach and touchdown or to a point where in the opinion of the examiner that a safe full stop landing could be made.
(14) Maintains positive directional control and crosswind correction during the after-landing roll.
(15) Uses spoilers, prop reverse, thrust reverse, wheel brakes, and other drag/braking devices, as appropriate, in such a manner to bring the aeroplane to a safe stop.
(16) Accomplishes the appropriate after-landing checklist items or coordinates with crew to ensure completion of after-landing checklist items in a timely manner and as recommended by the manufacturer, after clearing the runway in a timely manner and as recommended by the manufacturer.

E. TASK: ROUGH WATER APPROACH AND LANDING (AMES/ASES)
References: POH/AFM
Note: If a rough water condition does not exist, the applicant's knowledge of rough water elements must be evaluated through oral testing. The applicant's skill must be evaluated by simulating the TASK.
Objective: To determine that the applicant:
(1) Exhibits knowledge of the elements related to a rough water approach and landing.
(2) Considers the wind conditions, surrounding terrain, water depth, debris, and other watercraft.
(3) Selects a suitable approach direction and touchdown area.
(4) Establishes the recommended approach and landing configuration and adjusts power and pitch attitude as required.
(5) Ensures that the landing gear and water rudders are retracted, if applicable.
(6) Maintains a stabilised approach and recommended airspeed with gust factor applied, ±5 knots.
(7) Contacts the water at the correct pitch attitude and touchdown speed.
(8) Makes smooth, timely, and correct power and control application during the landing while remaining alert for a go-around should conditions be too rough.
(9) Maintains positive after-landing control.
(10) Completes appropriate checklists or coordinates with crew to ensure completion of afterlanding checklist items in a timely manner and as recommended by the manufacturer or approved method.

F. TASK: GLASSY WATER APPROACH AND LANDING (AMES/ASES)
References: POH/AFM
Note: If a glassy water condition does not exist, the applicant's satisfactory knowledge of glassy water elements must be evaluated through oral testing. The applicant's skill must be evaluated by simulating the TASK.
Objective: To determine that the applicant:
(1) Exhibits satisfactory knowledge of the elements related to a glassy water approach and landing.
(2) Considers the surrounding terrain, visual attitude references, water depth, debris, and other watercraft.
(3) Selects a suitable approach path and touchdown area.
(4) Ensures that the landing gear and water rudders are retracted, if applicable.
(5) Establishes the recommended approach and landing configuration and adjusts power and pitch attitude as required.

(6) Maintains a slightly nose-high stabilised approach at the recommended airspeed, ±5 knots and descent rate from last altitude reference, until touchdown.
(7) Makes smooth, timely, and correct power and control adjustments to maintain proper attitude and rate of descent to touchdown.
(8) Contacts the water at the correct pitch attitude and slows to idle taxi speed.
(9) Completes appropriate checklists or coordinates with crew to ensure completion of checklist items in a timely manner and as recommended by the manufacturer.

G. TASK: CONFINED-AREA APPROACH AND LANDING (AMES/ASES)
References: POH/AFM
Note: This TASK simulates an approach and landing to a small pond, which would require a spiral approach, wings level landing, and step turn upon landing; and a straight ahead approach and landing to a narrow waterway with obstructions at either end. The examiner must evaluate both landing situations for this TASK.
Objective: To determine that the applicant:
(1) Exhibits knowledge of the elements related to a confined-area approach and landing.
(2) Considers the wind conditions, surrounding terrain, surface condition, water depth, debris, and other watercraft.
(3) Selects a suitable approach path and touchdown area.
(4) Establishes the recommended approach and landing configuration and airspeed, and adjusts pitch attitude and power as required.
(5) Ensures that the landing gear and water rudders are retracted, if applicable.
(6) Maintains a stabilised approach and recommended approach airspeed with gust factor applied, ±5 knots.
(7) Makes smooth, timely, and correct power and control application during the roundout and touchdown.
(8) Touches down smoothly at the recommended airspeed and pitch attitude, beyond and within 100 feet of a specified point/area.
(9) Maintains crosswind correction and directional control throughout the approach and landing.
(10) Completes appropriate checklists or coordinates with crew to ensure completion of checklist items in a timely manner and as recommended by the manufacturer.

H. TASK: REJECTED LANDING
References: SLCAR Part 1A; AIM; POH/AFM
Note: The manoeuvre may be combined with instrument, circling, or missed approach procedures, but instrument conditions need not be simulated below 100 feet above the runway. This manoeuvre should be initiated approximately 50 feet above the runway or landing area and approximately over the runway threshold or as recommended by the FSB Report.
For those applicants seeking a VFR only type rating in an aeroplane not capable of instrument flight, and where this manoeuvre is accomplished with a simulated engine failure, it should not be initiated at speeds or altitudes below that recommended in the POH.
Objective: To determine that the applicant:
(1) Exhibits satisfactory knowledge of a rejected landing procedure including the conditions that dictate a rejected landing, the importance of a timely decision, LAHSO considerations, the recommended airspeed/V-speeds, and also the applicable "clean-up" procedure.

(2) Makes a timely decision to reject the landing for actual or simulated circumstances and makes appropriate notification when safety-of-flight is not an issue.
(3) Applies the appropriate power setting for the flight condition and establishes a pitch attitude necessary to obtain the desired performance.
(4) Retracts the wing flaps/drag devices and landing gear, if appropriate, in the correct sequence and at a safe altitude, establishes a positive rate-of-climb and the appropriate airspeed/V-speed within ±5 knots.
(5) Trims the aeroplane as necessary, and maintains the proper ground track during the rejected landing procedure.
(6) Accomplishes the appropriate after-landing checklist items or coordinates with crew to ensure timely completion of checklist items, in accordance with approved procedures.
(7) Reports reject to ATC in a timely manner, after executing reject procedures.

I. TASK: LANDING FROM A NO FLAP OR A NON-STANDARD FLAP APPROACH

References: SLCAR Part 2

Note: This manoeuvre need not be accomplished for a particular aeroplane type if the Administrator has determined that the probability of flap extension failure on that type aeroplane is extremely remote due to system design. The examiner must determine whether checking on slats only and partial-flap approaches are necessary for the skill test. However, probability of asymmetrical flap failures should be considered in this making this determination.

Objective: To determine that the applicant:

(1) Exhibits knowledge of the factors, which affect the flight characteristics of an aeroplane when full or partial flaps, leading edge flaps, and other similar devices become inoperative.
(2) Uses the correct airspeeds/V-speeds for the approach and landing.
(3) Maintains the proper aeroplane pitch attitude and flightpath for the configuration, gross weight, surface winds, and other applicable operational considerations.
(4) Uses runway of sufficient length for the zero or non-standard flap condition.
(5) Manoeuvres the aeroplane to a point where a touchdown at an acceptable point on the runway and a safe landing to a full stop could be made.
(6) After landing, uses spoilers, prop reverse, thrust reverse, wheel brakes, and other drag/braking devices, as appropriate, in such a manner to bring the aeroplane to a safe stop.

VII. AREA OF OPERATION: NORMAL AND ABNORMAL PROCEDURES

A. TASK: NORMAL AND ABNORMAL PROCEDURES

References: SLCAR Part 1A; POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the normal and abnormal procedures of the systems, subsystems, and devices relative to the aeroplane type (as may be determined by the examiner); knows immediate action items to accomplish, if appropriate, and proper checklist to accomplish or to call for, if appropriate.
(2) Demonstrates the proper use of the aeroplane systems, subsystems, and devices (as may be determined by the examiner) appropriate to the aeroplane, such as:
  (a) Powerplant
  (b) Fuel system

(c) Electrical system
(d) Hydraulic system
(e) Environmental and pressurisation systems
(f) Fire detection and extinguishing systems
(g) Navigation and avionics systems to include backup (fail down) modes and procedures
(h) Automatic flight control system, electronic flight instrument system, and related subsystems to include backup (fail down) modes and procedures
(i) Flight control systems
(j) Anti-ice and de-ice systems
(k) Aeroplane and personal emergency equipment
(l) Other systems, subsystems, and devices specific to the type aeroplane, including make, model, and series

VIII. AREA OF OPERATION: EMERGENCY PROCEDURES

A. TASK: EMERGENCY PROCEDURES

References: SLCAR Part 1A; POH/AFM

Objective: To determine that the applicant:

(1) Exhibits satisfactory knowledge of the emergency procedures (as may be determined by the examiner) relating to the particular aeroplane type.

(2) Demonstrates the proper emergency procedures (as must be determined by the examiner) relating to the particular aeroplane type, such as:
(a) Emergency descent (maximum rate)
(b) In-flight fire and smoke removal
(c) Rapid decompression
(d) Emergency evacuation
(e) Airframe icing
(f) Others (as may be required by the AFM)

(3) Demonstrates the proper procedure for any other emergency outlined (as determined by the examiner) in the appropriate approved AFM to include demonstration of flight by reference to standby flight instruments.

IX. AREA OF OPERATION: POST-FLIGHT PROCEDURES

A. TASK: AFTER-LANDING PROCEDURES

References: POH/AFM

Objective: To determine that the applicant:

(1) Exhibits knowledge of safe after landing, taxi, ramping, anchoring, docking, and mooring procedures, as appropriate.

(2) Exhibits procedures to ensure the pilot maintains strict focus on the movement of the aircraft and ATC communications.

(3) Demonstrates proficiency by maintaining correct and positive control. In aeroplanes equipped with float devices, this includes water taxiing, approaching a buoy, sailing, and docking.

(4) Utilises procedures for holding the pilot's workload to a minimum during taxi operations.

(5) Maintains proper spacing on other aircraft, obstructions, and persons.

(6) Utilises taxi operation planning procedures, such as recoding taxi instructions, reading back taxi clearances, and reviewing taxi routes on the aerodrome diagram.

(7) Utilises procedures to ensure that clearance or instructions that are actually received are adhered to rather than the ones expected to be received.

(8) Demonstrates 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.
(9) Accomplishes the applicable checklist items or coordinates with crew to ensure completion of checklist items in a timely manner and as recommended by the manufacturer and performs the recommended procedures.
(10) Conducts appropriate after-landing/taxi procedures in the event the aircraft is on a taxiway that is between parallel runways.
(11) Demonstrates specific procedures for operations at an aerodromes with an operating air traffic control tower, with emphasis on ATC communications and runway entry/crossing authorisations.
(12) Demonstrates and explains ATC communications and pilot actions before landing, and after landing at aerodromes.
(13) Maintains the desired track and speed.
(14) Complies with instructions issued by ATC (or the examiner simulating ATC).
(15) Observes runway hold lines, localiser and glide slope critical areas, and other surface control markings and lighting to prevent a runway incursion.
(16) Maintains constant vigilance and aeroplane control during the taxi operation.
(17) Demonstrates and explains procedural differences for night operations.
(18) Demonstrates and explains the use(s) of aircraft exterior lighting and differences for day and night operations.
(19) Explains and discusses the hazards of low visibility operations.

B. TASK: ANCHORING (AMES/ASES)
References: POH/AFM
Objective: To determine that the applicant:
(1) Exhibits knowledge of the elements related to anchoring in lakes, rivers, and tidal areas.
(2) Selects a suitable area for anchoring considering seaplane movement, water depth, tides, wind, and weather changes.
(3) Uses an adequate number of anchors and lines of sufficient strength and length to ensure the seaplane's security.

C. TASK: DOCKING AND MOORING (AMES/ASES)
References: POH/AFM
Objective: To determine that the applicant:
(1) Exhibits knowledge of the elements related to docking or 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: BEACHING (AMES/ASES)
References: POH/AFM
Objective: To determine that the applicant:
(1) Exhibits knowledge of the elements related to beaching.
(2) Selects a suitable area for beaching, considering water depth, current, tide, and wind.
(3) Approaches from the proper direction and at a suitable speed for the beach condition.

(4) Beaches and secures the seaplane in a manner that will protect it from harmful effects of wind, waves, and changes in water level.
(5) Departs the beach in a safe manner, considering wind, current, traffic, and hazards.

E. TASK: RAMPING (AMES/ASES)
References: POH/AFM
Objective: To determine that the applicant:
(1) Exhibits knowledge of the elements related to ramping.
(2) Approaches the ramp from the proper direction and at a safe speed, considering current, wind, and type of ramp.
(3) Ramps the seaplane at the proper speed and attitude.
(4) Secures the seaplane on the ramp in a manner that will protect it from the harmful effects of wind, waves, and changes of water level.
(5) Departs the ramp in a manner that does not endanger other persons or watercraft in the area.
(6) Re-enters the water.

F. TASK: PARKING AND SECURING
References: POH/AFM
Objective: To determine that the applicant:
(1) Demonstrates knowledge of the parking, and the securing aeroplane procedures.
(2) Demonstrates knowledge of the aeroplane forms/logs to record the flight time/discrepancies.
(3) Demonstrates knowledge of any installed and auxiliary aircraft security equipment, as appropriate.

APPENDIX 1: TASK VS. FLIGHT SIMULATION DEVICE CREDIT

A1. AEROPLANE TASK VS SIMULATION DEVICE CREDIT

Examiners conducting the Airline Transport Pilot and Aircraft Type Rating Skill Test Standards – Aeroplane with simulation devices should consult appropriate documentation to ensure that the device has been approved for training, testing, and checking the TASKs in question. 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 -CAA For purposes of this STS, the CAA uses the FSTD qualification standards in SLCAR Part 1A, and related ACs. The device must continue to meet qualification standards through continuing evaluations as outlined in the appropriate qualification standard.

(2) SL CAA must approve the device for training, testing, and checking the specific TASKs listed in this appendix.

Note: There may be an arrangement that allows SLCAA 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

Notes:

1. The aeroplane may be used for all TASKs.
2. Training Devices below Level 4 may NOT be used for aeroplane type ratings.
3. Standards for and use of Level 1 Flight Training Devices have not been determined.

A3 FLIGHT SIMULATION TRAINING DEVICE LEVEL

FLIGHT TASK	FLIGHT SIMULATION DEVICE LEVEL										
Areas of Operation – Section 3	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**A**	**B**	**C**	**D**
II. Pre-flight Preparation											
A. Pre-Flight Inspection	--	X	X	X	X	X	X	X	X	X	X
B. Powerplant Start	--	X	X	X	X	X	X	X	X	X	X
C. Taxiing	--	--	--	--	--	--	--	--	--	X	X
D. Sailing (AMES/ASES)	--	X	X	X	X	X	X	X	X	X	X
E. Seaplane Base/Water Landing Site Markings and Lighting (AMES/ASES)	--	X	X	X	X	X	X	X	X	X	X
F. Pre-Take-Off Checks	--	X	X	X	X	X	X	X	X	X	X
III. Take-Off and Departure Phase											
A. Normal and Crosswind Take-Off	--	--	--	--	--	--	--	--	--	X	X
B. Glassy Water Take-Off and Climb (AMES/ASES)	--	--	X	--	--	X	X	X	X	X	X
C. Rough Water Take-Off and Climb (AMES/ASES)	--	--	--	--	--	--	--	X	X	X	X
D. Confined-Area Take-Off and Climb (ASES/ASES)	--	--	X	--	--	X	X	X	X	X	X
E. Instrument Take-Off	--	--	X	--	--	X	X	X	X	X	X
F. Powerplant Failure During Take-Off	--	A	X	A	A	X	X	X	X	X	X
G. Rejected Take-Off	--	A	X	A	A	X	X	X	X	X	X
H. Departure Procedures	--	A	X	A	A	X	X	X	X	X	X
IV. In-flight Manoeuvres											
A. Steep Turns	--	--	X	--	--	X	X	X	X	X	X
B. Approaches to Stalls and Stall Recovery (Use of Levels 3, 6, and 7 requires operational synthetic stall warning system.)	--	--	X	--	--	X	X	X	X	X	X
C. Powerplant Failure – Multi-engine Aeroplane	--	--	--	--	--	--	--	X	X	X	X
D. Powerplant Failure – Single-Engine Aeroplane	--	--	X	--	--	X	X	X	X	X	X
E. Specific Flight Characteristics	Level of device as determined by the aeroplane Flight Standardisation Board (FSB)										
F. Recovery from Unusual Attitudes	--	--	X	--	--	--	--	X	X	X	X

FLIGHT TASK	FLIGHT SIMULATION DEVICE LEVEL										
Areas of Operation – Section 2	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**A**	**B**	**C**	**D**
V. Instrument Procedures											
A. Standard Terminal Arrival/Flight Management System Procedures	--	--	X	--	--	X	X	X	X	X	X
B. Holding	--	--	X	--	--	X	X	X	X	X	X
C1. Precision Approaches (All Engines Operating) (Autopilot/Manual Flt. Dir. Assist/manual Raw Data) (Levels 2 and 5 limited to A/P coupled approach only)	--	A	X	--	A	X	X	X	X	X	X
C2. Precision Instrument Approach (PA) (One Engine inop.) (Manual Flt. Dir. Assist/Manual Raw Data)	--	--	--	--	--	--	--	X	X	X	X
D. Non-precision Approaches (NPA) (Not more than one authorised in a device less than Level A simulator) (Levels 2 and 5 use limited to A/P coupled approach only.)	--	A	X	--	A	X	X	X	X	X	X
E. Circling Approach (each appr. must be specifically auth.)	--	--	--	--	--	--	--	X	X	X	X
F1. Missed Approach (Normal)	--	--	--	--	--	--	--	X	X	X	X
F2. Missed Approach (Powerplant failure)	--	--	--	--	--	--	--	X	X	X	X
VI. Landings and Approaches to Landings											
A. Normal and Crosswind Approaches and Landings	--	--	--	--	--	--	--	--	--	X	X
B. Landing From a Precision Approach (PA)	--	--	--	--	--	--	--	--	--	X	X
C. Approach and Landing with (Simulated) Powerplant Failure – Multi-Engine Aeroplane	--	--	--	--	--	--	--	--	--	X	X
D. Landing from Circling Approach	--	--	--	--	--	--	--	--	--	X	X
E. Rough Water Approach and Landing (AMES/ASES)	--	--	--	--	--	--	--	X	X	X	X
F. Glassy Water Approach and Landing (AMES/ASES)	--	--	--	--	--	--	--	--	--	X	X
G. Confined-Area Approach and Landing (AMES/ASES)	--	A	X	A	A	X	X	X	X	X	X
H. Rejected Landing	--	A	X	A	A	X	X	X	X	X	X
I. Landing From a No Flap or a Non-Standard Flap Approach	--	A	X	A	A	X	X	X	X	X	X

FLIGHT TASK		FLIGHT SIMULATION DEVICE LEVEL										
Areas of Operation – Section 3		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**A**	**B**	**C**	**D**
VII. Normal and Abnormal Procedures (*1) (2)**												
A. Normal and Abnormal Procedures		--	A	X	A	A	X	X	X	X	X	X
VIII. Emergency Procedures												
A. Emergency Procedures		--	--	X	--	--	X	X	X	X	X	X
IX. Post-flight Procedures												
A. After-Landing Procedures		--	A	X	A	A	X	X	X	X	X	X
B. Anchoring (AMES/ASES)	--	A	X	A	A	X	X	X	X	X	X	X
C. Docking and Mooring (AMES/ASES)	--	A	X	A	A	X	X	X	X	X	X	X
D. Beaching (AMES/ASES)	--	A	X	A	A	X	X	X	X	X	X	X
E. Ramping (AMES/ASES	--	A	X	A	A	X	X	X	X	X	X	X
F. Parking and Securing		--	A	X	A	A	X	X	X	X	X	X

(*1) Evaluation of normal and abnormal procedures may be accomplished in conjunction with other events.

(**2) Situations resulting in asymmetrical thrust or drag conditions (i.e. asymmetrical flight controls) must be accomplished in at least a Level A device. However, shutdown and restart (procedures only) may be accomplished in a properly equipped FTD.