



**SKILL TEST STANDARDS**  
**PRIVATE PILOT – AEROPLANE SINGLE ENGINE**

**Purpose**— This Skill Test Standard is provided to individuals, organizations and examiners regarding the determination that an individual’s skill level is adequate for the issuance of a Private Pilot License with the appropriate rating for—

- 1) **Aeroplane Single Engine Land, or**
- 2) **Aeroplane Single Engine Sea.**

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● Advisory Circulars are intended to provide advice and guidance to illustrate a means, but not necessarily the only means, of complying with the Regulations, or to explain certain regulatory requirements by providing informative, interpretative and explanatory material.

● Where an AC is referred to in a 'Note' below the regulation, the AC remains as guidance material,

● ACs should always be read in conjunction with the referenced regulations.

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## **SECTION 1 GENERAL**

### **1.1 STATUS OF THIS SKILL TEST STANDARD**

This is original issuance [1]2017 to this STS.

### **1.2 BACKGROUND**

- A. ICAO Standards in Annex 1, Personnel Licensing, require that, before issuing an Private Pilot License, the State must assess the knowledge and skill of the individual to perform such operations.
- B. RCAR Part 7 establishes the specific requirements for PPL testing that parallel the ICAO Standards.
- C. This STS provides amplified standards for a PPL applicant and the person assigned to conduct the skill test for license

### **1.3 APPLICABILITY**

- A. This STS is published for use by examiners for determination of an individual's fitness to be issued and continue to hold PPL privileges.
- B. Flight instructors are expected to use these standards when preparing applicants for their PPL skill tests.
- C. Applicants should be familiar with these skill test standards and refer to them during their training.

## 1.4 RELATED REGULATIONS

The following regulations are directly applicable to the guidance contained in this STS—

- RCAR Part 7, Personnel Licensing
- RCAR Part 10, Operations of Aircraft

## 1.5 RELATED PUBLICATIONS

For further information on this topic, individuals, instructors and examiners are invited to consult the following publications—

1) RCAA

- ◆ AC 07-001, Personnel Licensing
- ◆ AC 07-003, English Language Proficiency Standards
- ◆ AC 07-005, Flight Testing

Copies may be obtained from the RCAA.

2) Manufacturer of the aircraft to be used for the skill test

- ◆ Pilot Operating Handbook, or
- ◆ Approved Flight Manual

3) United States Federal Aviation Administration (FAA)

- ◆ AC 00-45, Aviation Weather
- ◆ FAA-H-80-83-25, Private Pilot Handbook of Aeronautical Knowledge
- ◆ FAA-H-8083-3A, Airplane Flying Handbook
- ◆ FAA-H-8083-23, Seaplane Operations Handbook

- Copies are normally available through flight schools and instructors.
- Contact the RCAA if unable to find copies.

4) International Civil Aviation Organization (ICAO)

- ◆ Annex, 1, Personnel Licensing

Copies may be obtained from Document Sales Unit, ICAO, 999 University Street, Montreal, Quebec, Canada H3C 5H7.

## 1.6 DEFINITIONS & ACRONYMS

A. The following definitions are used in this STS—

- 1) **Aircraft – category.** Classification of aircraft according to specified basic characteristics, e.g. aeroplane, rotorcraft, glider, lighter-than-air, powered-lift.
- 2) **Competency.** A combination of skills, knowledge and attitudes required to perform a task to the prescribed standard.
- 3) **Crew resource management.** A program designed to improve the safety of flight operations by optimizing the safe, efficient, and effective use of human resources, hardware, and information through improved crew communication and coordination.
- 4) **Error.** An action or inaction by the flight crew that leads to deviations from organizational or flight crew intentions or expectations.
- 5) **Error management.** The process of detecting and responding to errors with countermeasures that reduce or eliminate the consequences of errors and mitigate the probability of further errors or undesired aircraft states.

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- 6) **Examiner.** A qualified person designated by RCAA-FSS to conduct a proficiency test, a skill test for an licence or rating, or a knowledge test under Rwanda regulations.
  - 7) **Flight simulation training device.** Any one of the following three types of apparatus in which flight conditions are simulated on the ground—
    - (a) A **flight simulator**, which provides an accurate representation of the flight deck of a particular aircraft type to the extent that the mechanical, electrical, electronic, etc. aircraft systems control functions, the normal environment of flight crew members, and the performance and flight characteristics of that type of aircraft are realistically simulated;
    - (b) A **flight procedures trainer**, which provides a realistic flight deck environment, and which simulates instrument responses, simple control functions of mechanical, electrical, electronic, etc. aircraft systems, and the performance and flight characteristics of aircraft of a particular class;
    - (c) A **basic instrument flight trainer**, which is equipped with appropriate instruments, and which simulates the flight deck environment of an aircraft in flight in instrument flight conditions
  - 8) **Flight test.** For the purpose of this STS, a portion of a skill test that includes Tasks that are normally accomplished while operating the aircraft.
  - 9) **Practical Test.** For the purpose of this STS, a portion of the skill test that includes Tasks accomplished before the flight portion.
  - 10) **Rating.** An authorisation entered on or associated with a licence and forming part thereof, stating special conditions, privileges or limitations pertaining to such licence.
  - 11) **Scenario.** A plan of action that includes the provision for accomplishing each Task specified in the skill test standards in practical and logical manner.
  - 12) **Threat management.** The process of detecting and responding to threats with countermeasures that reduce or eliminate the consequences of threats and mitigate the probability of errors or undesired aircraft states
  - 13) **Threat.** Events or errors that occur beyond the influence of the flight crew, increase operational complexity and must be managed to maintain the margin of safety.
- B. The following acronyms are used in this STS—
- 1) **AC** – Advisory Circular
  - 2) **FAC** – Formal Application Checklist
  - 3) **FSS** – Flight Safety Services
  - 4) **PEL** – Personnel Licensing
  - 5) **PPL** – Private Pilot License
  - 6) **RCAA** – Rwanda Civil Aviation Authority
  - 7) **RCAR** – Rwanda Civil Aviation Regulations
  - 8) **STS** – Skill Test Standards
  - 9) **V<sub>MC</sub>** – Minimum Control with the Critical Engine Inoperative
  - 10) **V<sub>X</sub>** – Best Angle of Climb
  - 11) **V<sub>Y</sub>** – Best Rate of Climb
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## SECTION 2 INTRODUCTORY INFORMATION

### 2.1 PRIVATE PILOT – AEROPLANE SKILL TEST PREREQUISITES

An applicant for the Private Pilot–Aeroplane Skill Test is required to—

- 1) Be at least 17 years of age;
- 2) Be able to read, speak, write, and understand the English language. If there is a doubt, use AC 07-003, Language Proficiency Standards;
- 3) Have passed the appropriate private pilot knowledge test since the beginning of the 24th month before the month in which he or she takes the skill test;
- 4) Have satisfactorily accomplished the required training and obtained the aeronautical experience prescribed;
- 5) Possess at least a current Class 2 medical certificate;
- 6) Have an endorsement from an authorized instructor certifying that the applicant—
  - (a) Has received and logged training time within 60 days preceding the date of application in preparation for the skill test, and
  - (b) Is prepared for the skill test; and
- 7) Also have an endorsement certifying that the applicant has demonstrated satisfactory knowledge of the subject areas in which the applicant was deficient on the airman knowledge test.

If the applicant has not demonstrated at least Level 4 English language proficiency. The license will contain the limitation:

- NOT VALID FOR INTERNATIONAL FLIGHT.

### 2.2 APPLICANT SKILL TEST PREPARATION CHECKLIST

The following guidance is provided to ensure that the applicant arrives at the appointment with all equipment and documents necessary for the administration of the skill test, including—

#### 2.2.1 APPOINTMENT WITH EXAMINER

- A. Contact the RCAA to be assigned an examiner for the purpose of the skill test.
- B. Contact the examiner to arrange a suitable location, date and time.
- C. Plan to arrive at the designated location before the actual time of the appointment.

#### 2.2.2 ACCEPTABLE AIRCRAFT

The applicant must provide a suitable aircraft for the type of skill test to be administered, and provide the following associated documentation—

- 1) Airworthiness certificate
- 2) Registration certificate
- 3) Operating limitations
- 4) Aircraft logbook maintenance records of airworthiness inspections and AD compliance
- 5) Pilot's Operating Handbook and/or the Approved Airplane Flight Manual

#### 2.2.3 PERSONAL EQUIPMENT

The applicant must provide the following personal equipment for the skill test—

- 1) View-limiting device

- 2) Current aeronautical charts
- 3) Computer and plotter
- 4) Flight plan form
- 5) Flight logs
- 6) Appropriate route guide and other flight information publications

#### 2.2.4 PERSONAL RECORDS

The applicant must provide the following personal records before the skill test can be administered—

- 1) Identification-photo/signature ID
- 2) Pilot certificate
- 3) Current and appropriate medical certificate
- 4) Completed RCAA Form 541, Application for Airman License, with Instructor's Signature (If applicable)
- 5) Aeronautical knowledge test report
- 6) Pilot Logbook with appropriate instructor endorsements
- 7) RCAA-Form 547, Notice of Disapproval (if applicable)
- 8) Graduation certificate from an Approved Training Organization (if applicable)
- 9) Examiner's fee

### 2.3 SKILL TEST STANDARDS FORMAT

- A. **Areas of Operation** are phases of the skill test arranged in a logical sequence within each standard.
- They begin with Preflight Preparation and end with Post-flight Procedures.
  - The examiner, however, may conduct the operational portions of the skill test in any sequence that will result in a complete and efficient test.
  - However the ground portion of the skill test shall be accomplished before the flight portion.
- B. **Tasks** are titles of knowledge areas, flight procedures, or maneuvers appropriate to an Area of Operation.
- C. **Applicable to:** The abbreviation(s) immediately following a TASK refer to the category and/or class aircraft appropriate to that TASK. The meaning of each abbreviation is as follows.
- ASEL – Aeroplane-Single-Engine Land
  - ASES – Aeroplane-Single-Engine Sea
- D. The **Objective** lists the elements that must be satisfactorily performed to demonstrate competency in a TASK. The Objective includes—
- 1) Specifically what the applicant should be able to do;

- The TASKs appropriate to the class aeroplane (ASEL, ASES, AMEL, or AMES) used for the test are specified in this STS.
- The absence of a class indicates the task is for all classes.
- An accompanying note may be used to emphasize special considerations required in the AREA OF OPERATION or TASK.

- 2) Conditions under which the *Task* is to be performed; and
- 3) Acceptable performance standards.

The tolerances specified in the individual skill test tasks represent the performance expected in good flying conditions.

## 2.4 WAIVERS FOR PREVIOUS ACCOMPLISHMENT OF TASK

- A. The actual accomplishment of the required Areas of Operation or specific Tasks in those operations may be waived at the examiner's discretion when the applicant holds another aeroplane category and class rating in which—
- 1) Those tasks were accomplished; and
  - 2) There are no obvious skill differences for the accomplishment of those tasks between the class ratings.

## 2.5 SKILL STANDARDS SPECIFIED BY REGULATION

The final determination of an applicant's ability to hold a license or rating is based on a demonstration of the ability to perform as pilot-in command to perform the procedures and maneuvers to the degree of competency appropriate to the privileges granted and to—

- 1) Recognize and manage threats and errors;
- 2) Manually control the aircraft within its limitations at all times;
- 3) Complete all maneuvers with smoothness and accuracy;
- 4) Exercise good judgment and airmanship;
- 5) Apply aeronautical knowledge; and
- 6) Maintain control of the aircraft at all times in a manner such that the successful outcome of a procedure or maneuver is assured.

## 2.6 UNSATISFACTORY PERFORMANCE

- A. If, in the judgment 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 practical test is failed.
- B. The examiner or applicant may discontinue the test at any time when the failure of an AREA OF OPERATION makes the applicant ineligible for the certificate or rating sought.
- The test may be continued ONLY with the consent of the applicant.

- C. If the test is discontinued, the applicant is entitled credit for only those AREAS OF OPERATION and their associated TASKs satisfactorily performed.

The applicant must understand that during a retest, and at the discretion of the examiner, any TASK may be re-evaluated, including those previously passed.

- D. Typical areas of unsatisfactory performance and grounds for disqualification are—
- 1) Any action or lack of action by the applicant that requires corrective intervention by the examiner to maintain safe flight.
  - 2) Failure to use proper and effective visual scanning techniques to clear the area before and while performing maneuvers.
  - 3) Consistently exceeding tolerances stated in the skill test TASK Objectives.
  - 4) Failure to take prompt corrective action when tolerances are exceeded.

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## SECTION 3 AREA OF OPERATION: PREFLIGHT PREPARATION

### 3.1 TASK: CERTIFICATES & DOCUMENTS

Applicable To:: ASEL, ASES

*Objective.* To determine that the applicant exhibits knowledge of the elements related to certificates and documents by—

- 1) Explaining—
  - (a) Private pilot certificate privileges, limitations, and recent flight experience requirements.
  - (b) Medical certificate class and duration.
  - (c) Pilot logbook or flight records.
- 2) Locating and explaining—
  - (a) Airworthiness and registration certificates.
  - (b) Operating limitations, placards, instrument markings, and POH/AFM.
  - (c) Weight and balance data and equipment list.

### 3.2 TASK: AIRWORTHINESS REQUIREMENTS

Applicable To:: ASEL, ASES

*Objective..* To determine that the applicant exhibits knowledge of the elements related to airworthiness requirements by—

- 1) Explaining—
  - (a) Required instruments and equipment for day/night VFR.
  - (b) Procedures and limitations for determining airworthiness of the aeroplane with inoperative instruments and equipment with and without an MEL.
  - (c) Requirements and procedures for obtaining a special flight permit.
- 2) Locating and explaining—
  - (a) Airworthiness directives.
  - (b) Compliance records.
  - (c) Maintenance/inspection requirements.
  - (d) Appropriate record keeping.

### 3.3 TASK: WEATHER INFORMATION

Applicable To:: ASEL, ASES

*Objective..* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to weather information by analyzing weather reports, charts, and forecasts from various sources with emphasis on—
    - (a) METAR, TAF, and FA.
    - (b) Surface analysis chart.
    - (c) Radar summary chart.
    - (d) Winds and temperature aloft chart.
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- (e) Significant weather prognostic charts.
  - (f) Convective outlook chart.
  - (g) AWOS, ASOS, and ATIS reports.
- 2) Makes a competent "go/no-go" decision based on available weather information.

### 3.4 TASK: CROSS-COUNTRY FLIGHT PLANNING

Applicable To: ASEL, ASES

*Objective.* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to cross-country flight planning by presenting and explaining a pre-planned VFR cross-country flight, as previously assigned by the examiner.
- 2) Uses appropriate and current aeronautical charts.
- 3) Properly identifies airspace, obstructions, and terrain features.
- 4) Selects easily identifiable en route checkpoints.
- 5) Selects most favorable altitudes considering weather conditions and equipment capabilities.
- 6) Computes headings, flight time, and fuel requirements.
- 7) Selects appropriate navigation system/facilities and communication frequencies.
- 8) Applies pertinent information from NOTAMs, AF/D, and other flight publications.
- 9) Completes a navigation log and simulates filing a VFR flight plan.

On the day of the skill test, the final flight plan shall be to the first fuel stop, based on maximum allowable passengers, baggage, and/or cargo loads using real-time weather.

### 3.5 TASK: NATIONAL AIRSPACE SYSTEM

Applicable To: ASEL, ASES

*Objective.* To determine that the applicant exhibits knowledge of the elements related to the National Airspace System by explaining—

- 1) Basic VFR weather minimums-for all classes of airspace.
- 2) Airspace classes-their operating rules, pilot certification, and aeroplane equipment requirements for the following—
  - (a) Class A.
  - (b) Class B.
  - (c) Class C.
  - (d) Class D.
  - (e) Class E.
  - (f) Class G.
  - (g) Special use and other airspace areas.

### 3.6 TASK: PERFORMANCE & LIMITATIONS

Applicable To: ASEL, ASES

*Objective.* To determine that the applicant—

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- 1) Exhibits knowledge of the elements related to performance and limitations by explaining the use of charts, tables, and data to determine performance and the adverse effects of exceeding limitations.
- 2) Computes weight and balance. Determines the computed weight and center of gravity is within the aeroplane's operating limitations and if the weight and center of gravity will remain within limits during all phases of flight.
- 3) Demonstrates use of the appropriate performance charts, tables, and data.
- 4) Describes the effects of atmospheric conditions on the aeroplane's performance.

### **3.7 TASK: OPERATION OF SYSTEMS**

Applicable To:: ASEL, ASES

*Objective..* To determine that the applicant exhibits knowledge of the elements related to the operation of systems on the aeroplane provided for the flight test by explaining at least three (3) of the following systems.

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

### **3.8 TASK: WATER & SEAPLANE CHARACTERISTICS**

Applicable To:: ASES

*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) Protected and unprotected areas.
  - (c) Surface wind.
  - (d) Direction and strength of water current.
  - (e) Floating and partially submerged debris.
  - (f) Sandbars, islands, and shoals.
  - (g) Vessel traffic and wakes.
  - (h) Other features peculiar to the area.
- 2) Float and hull construction, and their effect on seaplane performance.

- 3) Causes of porpoising and skipping, and the pilot action required to prevent or correct these occurrences.

### 3.9 TASK: SEAPLANE BASES, MARITIME RULES & AIDS TO MARINE NAVIGATION

Applicable To: ASES

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

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

### 3.10 TASK: AEROMEDICAL FACTORS

Applicable To: ASEL, ASES

*Objective.* To determine that the applicant exhibits knowledge of the elements related to aeromedical factors by explaining—

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

## SECTION 4 AREA OF OPERATION: PREFLIGHT PROCEDURES

### 4.1 TASK: PREFLIGHT INSPECTION

Applicable To: ASEL, ASES

*Objective.* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to preflight inspection.
- 2) Inspects the aeroplane with reference to an appropriate checklist.
- 3) Verifies the aeroplane is in condition for safe flight.

This shall include which items must be inspected, the reasons for checking each item, and how to detect possible defects.

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## 4.2 TASK: COCKPIT MANAGEMENT

Applicable To: ASEL, ASES

*Objective.* To determine that the applicant—

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

## 4.3 TASK: ENGINE STARTING

Applicable To: ASEL, ASES

*Objective.* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to recommended engine starting procedures.
- 2) Positions the aeroplane properly considering structures, surface conditions, other aircraft, and the safety of nearby persons and property.
- 3) Utilizes the appropriate checklist for starting procedure.

This shall include the use of an external power source, hand propping safety, and starting under various atmospheric conditions.

## 4.4 TASK: TAXIING

Applicable To: ASEL

*Objective.* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to safe taxi procedures.
- 2) Performs a brake check immediately after the aeroplane begins moving.
- 3) Positions the flight controls properly for the existing wind conditions.
- 4) Controls direction and speed without excessive use of brakes.
- 5) Complies with airport/taxiway markings, signals, ATC clearances, and instructions.
- 6) Taxies so as to avoid other aircraft and hazards.

## 4.5 TASK: TAXIING & SAILING

Applicable To: ASES

*Objective.* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to water taxi and sailing procedures.
- 2) Positions the flight controls properly for the existing wind conditions.
- 3) Plans and follows the most favorable course while taxi or sailing considering wind, water current, water conditions and maritime regulations.
- 4) Uses the appropriate idle, plow, or step taxi technique.
- 5) Uses flight controls, flaps, doors, water rudder, and power correctly so as to follow the desired course while sailing.
- 6) Prevents and corrects for porpoising and skipping.

- 7) Avoids other aircraft, vessels, and hazards.
- 8) Complies with seaplane base signs, signals, and clearances.

#### 4.6 TASK: BEFORE TAKEOFF CHECK

Applicable To: ASEL, ASES

*Objective..* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to the before takeoff check.
- 2) Positions the aeroplane properly considering other aircraft/vessels, wind and surface conditions.
- 3) Divides attention inside and outside the cockpit.
- 4) Ensures that engine temperature and pressure are suitable for run- up and takeoff.
- 5) Accomplishes the before takeoff checklist and ensures the aeroplane is in safe operating condition.
- 6) Reviews takeoff performance airspeeds, takeoff distances, departure, and emergency procedures.
- 7) Avoids runway incursions and/or ensures no conflict with traffic prior to taxiing into takeoff position.

This shall include the reasons for checking each item and how to detect malfunctions.

### SECTION 5 AREA OF OPERATION: AIRPORT & SEAPLANE BASE OPERATIONS

#### 5.1 TASK: RADIO COMMUNICATIONS & ATC LIGHT SIGNALS

Applicable To: ASEL, ASES

*Objective..* To determine that the applicant—

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

#### 5.2 TASK: TRAFFIC PATTERNS

Applicable To: ASEL, ASES

*Objective..* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to traffic patterns.
- 2) Complies with proper traffic pattern procedures.
- 3) Maintains proper spacing from other aircraft.
- 4) Corrects for wind drift to maintain the proper ground track.
- 5) Maintains orientation with the runway/landing area in use.

This shall include procedures at airports with and without operating control towers, prevention of runway incursions, collision avoidance, wake turbulence avoidance, and wind shear.

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- 6) Maintains traffic pattern altitude,  $\pm 100$  feet (30 meters), and the appropriate airspeed,  $\pm 10$  knots.

### 5.3 TASK: AIRPORT/SEAPLANE BASE, RUNWAY & TAXIWAY SIGNS, MARKINGS, & LIGHTING

Applicable To:: ASEL, ASES

*Objective..* To determine that the applicant—

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

## SECTION 6 AREA OF OPERATION: TAKEOFFS, LANDINGS & GO AROUNDS

### 6.1 TASK: NORMAL & CROSSWIND TAKEOFF AND CLIMB

Applicable To:: ASEL, ASES

*Objective..* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to a normal and crosswind takeoff, climb operations, and rejected takeoff procedures.
- 2) Positions the flight controls for the existing wind conditions.
- 3) Clears the area; taxied into the takeoff position and aligns the aeroplane on the runway center/takeoff path.
- 4) Retracts the water rudders, as appropriate, (ASES) and advances the throttle smoothly to takeoff power.
- 5) Establishes and maintains the most efficient planing/lift-off attitude and corrects for porpoising and skipping (ASES).
- 6) Lifts off at the recommended airspeed and accelerates to  $V_Y$ .
- 7) Establishes a pitch attitude that will maintain  $V_Y + 10/-5$  knots.
- 8) Retracts the landing gear, if appropriate, and flaps after a positive rate of climb is established.
- 9) Maintains takeoff power and  $V_Y + 10/-5$  knots to a safe maneuvering altitude.
- 10) Maintains directional control and proper wind-drift correction throughout the takeoff and climb.
- 11) Complies with noise abatement procedures.
- 12) Completes the appropriate checklist.

If a crosswind condition does not exist, the applicant's knowledge of crosswind elements shall be evaluated through oral testing.

## 6.2 TASK: NORMAL & CROSSWIND APPROACH & LANDING

Applicable To: ASEL, ASES

*Objective.* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to a normal and crosswind approach and landing.
- 2) Adequately surveys the intended landing area (ASES).
- 3) Considers the wind conditions, landing surface, obstructions, and selects a suitable touchdown point.
- 4) Establishes the recommended approach and landing configuration and airspeed, and adjusts pitch attitude and power as required.
- 5) Maintains a stabilized approach and recommended airspeed, or in its absence, not more than  $1.3 V_{SO}$ , +10/-5 knots, with wind gust factor applied.
- 6) Makes smooth, timely, and correct control application during the roundout and touchdown.
- 7) Contacts the water at the proper pitch attitude (ASES).
- 8) Touches down smoothly at approximate stalling speed (ASEL).
- 9) Touches down at or within 400 feet (120 meters) beyond a specified point, with no drift, and with the aeroplane's longitudinal axis aligned with and over the runway center/landing path.
- 10) Maintains crosswind correction and directional control throughout the approach and landing sequence.
- 11) Completes the appropriate checklist.

If a crosswind condition does not exist, the applicant's knowledge of crosswind elements shall be evaluated through oral testing.

## 6.3 TASK: SOFT-FIELD TAKEOFF & CLIMB

Applicable To: ASEL

*Objective.* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to a soft-field takeoff and climb.
- 2) Positions the flight controls for existing wind conditions and to maximize lift as quickly as possible.
- 3) Clears the area; taxis onto the takeoff surface at a speed consistent with safety without stopping while advancing the throttle smoothly to takeoff power.
- 4) Establishes and maintains a pitch attitude that will transfer the weight of the aeroplane from the wheels to the wings as rapidly as possible.
- 5) Lifts off at the lowest possible airspeed and remains in ground effect while accelerating to  $V_X$  or  $V_Y$ , as appropriate.
- 6) Establishes a pitch attitude for  $V_X$  or  $V_Y$ , as appropriate, and maintains selected airspeed +10/-5 knots, during the climb.
- 7) Retracts the landing gear, if appropriate, and flaps after clear of any obstacles or as recommended by the manufacturer.
- 8) Maintains takeoff power and  $V_X$  or  $V_Y$ , +10/-5 knots to a safe maneuvering altitude.

- 9) Maintains directional control and proper wind-drift correction throughout the takeoff and climb.
- 10) Completes the appropriate checklist.

#### **6.4 TASK: SOFT-FIELD APPROACH & LANDING**

Applicable To: ASEL

*Objective..* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to a soft-field approach and landing.
- 2) Considers the wind conditions, landing surface and obstructions, and selects the most suitable touchdown area.
- 3) Establishes the recommended approach and landing configuration, and airspeed; adjusts pitch attitude and power as required.
- 4) Maintains a stabilized approach and recommended airspeed, or in its absence not more than  $1.3 V_{SO}$ , +10/-5 knots, with wind gust factor applied.
- 5) Makes smooth, timely, and correct control application during the roundout and touchdown.
- 6) Touches down softly with no drift, and with the aeroplane's longitudinal axis aligned with the runway/landing path.
- 7) Maintains crosswind correction and directional control throughout the approach and landing sequence.
- 8) Maintains proper position of the flight controls and sufficient speed to taxi on the soft surface.
- 9) Completes the appropriate checklist.

#### **6.5 TASK: SHORT-FIELD (CONFINED AREA) TAKEOFF & MAXIMUM PERFORMANCE CLIMB**

Applicable To: ASEL, ASES

*Objective..* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to a short-field (confined area ASES) takeoff and maximum performance climb.
- 2) Positions the flight controls for the existing wind conditions; sets the flaps as recommended.
- 3) Clears the area; taxies into takeoff position utilizing maximum available takeoff area and aligns the aeroplane on the runway center/takeoff path.
- 4) Selects an appropriate take off path for the existing conditions (ASES).
- 5) Applies brakes (if appropriate), while advancing the throttle smoothly to takeoff power.
- 6) Establishes and maintains the most efficient planing/lift-off attitude and corrects for porpoising and skipping (ASES).
- 7) Lifts off at the recommended airspeed, and accelerates to the recommended obstacle clearance airspeed or  $V_X$ .
- 8) Establishes a pitch attitude that will maintain the recommended obstacle clearance airspeed, or  $V_X$ , +10/-5 knots, until the obstacle is cleared, or until the aeroplane is 50 feet (20 meters) above the surface.

- 9) After clearing the obstacle, establishes the pitch attitude for  $V_Y$ , accelerates to  $V_Y$ , and maintains  $V_Y$ , +10/-5 knots, during the climb.
- 10) Retracts the landing gear, if appropriate, and flaps after clear of any obstacles or as recommended by manufacturer.
- 11) Maintains takeoff power and  $V_Y$  +10/-5 to a safe maneuvering altitude.
- 12) Maintains directional control and proper wind-drift correction throughout the takeoff and climb.
- 13) Completes the appropriate checklist.

## 6.6 TASK: SHORT-FIELD (CONFINED AREA) APPROACH & LANDING

Applicable To: ASEL, ASES

*Objective..* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to a short-field (confined area ASES) approach and landing.
- 2) Adequately surveys the intended landing area (ASES).
- 3) Considers the wind conditions, landing surface, obstructions, and selects the most suitable touchdown point.
- 4) Establishes the recommended approach and landing configuration and airspeed; adjusts pitch attitude and power as required.
- 5) Maintains a stabilized approach and recommended approach airspeed, or in its absence not more than  $1.3 V_{SO}$ , +10/-5 knots, with wind gust factor applied.
- 6) Makes smooth, timely, and correct control application during the roundout and touchdown.
- 7) Selects the proper landing path, contacts the water at the minimum safe airspeed with the proper pitch attitude for the surface conditions (ASES).
- 8) Touches down smoothly at minimum control airspeed (ASEL).
- 9) Touches down at or within 200 feet (60 meters) beyond a specified point, with no side drift, minimum float and with the aeroplane's longitudinal axis aligned with and over the runway center/landing path.
- 10) Maintains crosswind correction and directional control throughout the approach and landing sequence.
- 11) Applies brakes, (ASEL) or elevator control (ASEs), as necessary, to stop in the shortest distance consistent with safety.
- 12) 1Completes the appropriate checklist.

## 6.7 TASK: GLASSY WATER TAKEOFF & CLIMB

Applicable To: ASES

*Objective..* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to glassy water takeoff and climb.
- 2) Positions the flight controls and flaps for the existing conditions.

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

- 3) Clears the area; selects an appropriate takeoff path considering surface hazards and/or vessels and surface conditions.
- 4) Retracts the water rudders as appropriate; advances the throttle smoothly to takeoff power.
- 5) Establishes and maintains an appropriate planing attitude, directional control, and corrects for porpoising, skipping, and increases in water drag.
- 6) Utilizes appropriate techniques to lift seaplane from the water considering surface conditions.
- 7) Establishes proper attitude/airspeed, and accelerates to  $V_Y$ , +10/-5 knots during the climb.
- 8) Retracts the landing gear, if appropriate, and flaps after a positive rate of climb is established.
- 9) Maintains takeoff power  $V_y$  +10/-5 to a safe maneuvering altitude.
- 10) Maintains directional control and proper wind-drift correction throughout takeoff and climb.
- 11) Completes the appropriate checklist.

## 6.8 TASK: GLASSY WATER APPROACH & LANDING

Applicable To: ASES

*Objective..* To determine that the applicant—

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

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

## 6.9 TASK: ROUGH WATER TAKEOFF & CLIMB

Applicable To: ASES

*Objective.* To determine that the applicant—

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

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

## 6.10 TASK: ROUGH WATER APPROACH & LANDING

Applicable To: ASES

*Objective.* To determine that the applicant—

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

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

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- 10) Completes the appropriate checklist.

### 6.11 TASK: FORWARD SLIP TO A LANDING

Applicable To:: ASEL, ASES

*Objective..* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to forward slip to a landing.
- 2) Considers the wind conditions, landing surface and obstructions, and selects the most suitable touchdown point.
- 3) Establishes the slipping attitude at the point from which a landing can be made using the recommended approach and landing configuration and airspeed; adjusts pitch attitude and power as required.
- 4) Maintains a ground track aligned with the runway center/landing path and an airspeed, which results in minimum float during the roundout.
- 5) Makes smooth, timely, and correct control application during the recovery from the slip, the roundout, and the touchdown.
- 6) Touches down smoothly at the approximate stalling speed, at or within 400 feet (120 meters) beyond a specified point, with no side drift, and with the aeroplane's longitudinal axis aligned with and over the runway center/landing path.
- 7) Maintains crosswind correction and directional control throughout the approach and landing sequence.
- 8) Completes the appropriate checklist.

### 6.12 TASK: GO-AROUND/REJECTED LANDING

Applicable To:: ASEL, ASES

*Objective..* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to a go-around/rejected landing.
- 2) Makes a timely decision to discontinue the approach to landing.
- 3) Applies takeoff power immediately and transitions to climb pitch attitude for  $V_Y$ , and maintains  $V_Y + 10/-5$  knots.
- 4) Retracts the flaps as appropriate.
- 5) Retracts the landing gear, if appropriate, after a positive rate of climb is established.
- 6) Maneuvers to the side of the runway/landing area to clear and avoid conflicting traffic.
- 7) Maintains takeoff power  $V_Y + 10/-5$  to a safe maneuvering altitude.
- 8) Maintains directional control and proper wind-drift correction throughout the climb.
- 9) Completes the appropriate checklist.

## SECTION 7 AREA OF OPERATION: PERFORMANCE MANEUVER

### 7.1 TASK: STEEP TURNS

Applicable To:: ASEL, ASES

*Objective..* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to steep turns.
- 2) Establishes the manufacturer's recommended airspeed or if one is not stated, a safe airspeed not to exceed  $V_A$ .
- 3) Rolls into a coordinated 360° turn; maintains a 45° bank.
- 4) Performs the task in the opposite direction, as specified by the examiner.
- 5) Divides attention between aeroplane control and orientation.
- 6) Maintains the entry altitude,  $\pm 100$  feet (30 meters), airspeed,  $\pm 10$  knots, bank,  $\pm 5^\circ$ ; and rolls out on the entry heading,  $\pm 10^\circ$ .

## SECTION 8 AREA OF OPERATION: GROUND REFERENCE MANEUVERS

### 8.1 TASK: RECTANGULAR COURSE

Applicable To: ASEL, ASES

*Objective.* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to a rectangular course.
- 2) Selects a suitable reference area.
- 3) Plans the maneuver so as to enter a left or right pattern, 600 to 1,000 feet AGL (180 to 300 meters) at an appropriate distance from the selected reference area, 45° to the downwind leg.
- 4) Applies adequate wind-drift correction during straight-and-turning flight to maintain a constant ground track around the rectangular reference area.
- 5) Divides attention between aeroplane control and the ground track while maintaining coordinated flight.
- 6) Maintains altitude,  $\pm 100$  feet (30 meters); maintains airspeed,  $\pm 10$  knots.

The examiner may only evaluate one of the ground reference maneuvers to complete this Area of Operation.

### 8.2 TASK: S-TURNS

Applicable To: ASEL, ASES

*Objective.* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to S-turns.
  - 2) Selects a suitable ground reference line.
  - 3) Plans the maneuver so as to enter at 600 to 1,000 feet (180 to 300 meters) AGL, perpendicular to the selected reference line.
  - 4) Applies adequate wind-drift correction to track a constant radius turn on each side of the selected reference line.
  - 5) Reverses the direction of turn directly over the selected reference line.
  - 6) Divides attention between aeroplane control and the ground track while maintaining coordinated flight.
  - 7) Maintains altitude,  $\pm 100$  feet (30 meters); maintains airspeed,  $\pm 10$  knots.
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### 8.3 TASK: TURNS AROUND A POINT

Applicable To: ASEL, ASES

*Objective.* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to turns around a point.
- 2) Selects a suitable ground reference point.
- 3) Plans the maneuver so as to enter left or right at 600 to 1,000 feet (180 to 300 meters) AGL, at an appropriate distance from the reference point.
- 4) Applies adequate wind-drift correction to track a constant radius turn around the selected reference point.
- 5) Divides attention between aeroplane control and the ground track while maintaining coordinated flight.
- 6) Maintains altitude,  $\pm 100$  feet (30 meters); maintains airspeed,  $\pm 10$  knots.

## SECTION 9 AREA OF OPERATION: NAVIGATION

### 9.1 TASK: PILOTAGE & DEAD RECKONING

Applicable To: ASEL, ASES

*Objective.* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to pilotage and dead reckoning.
- 2) Follows the preplanned course by reference to landmarks.
- 3) Identifies landmarks by relating surface features to chart symbols.
- 4) Navigates by means of precomputed headings, groundspeeds, and elapsed time.
- 5) Corrects for and records the differences between preflight groundspeed and heading calculations and those determined en route.
- 6) Verifies the aeroplane's position within three (3) nautical miles of the flight-planned route.
- 7) Arrives at the en route checkpoints within five (5) minutes of the initial or revised ETA and provides a destination estimate.
- 8) Maintains the appropriate altitude,  $\pm 200$  feet (60 meters) and headings,  $\pm 15^\circ$ .

### 9.2 TASK: NAVIGATION SYSTEMS & RADAR SERVICES

Applicable To: ASEL, ASES

*Objective.* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to navigation systems and radar services.
  - 2) Demonstrates the ability to use an airborne electronic navigation system.
  - 3) Locates the aeroplane's position using the navigation system.
  - 4) Intercepts and tracks a given course, radial or bearing, as appropriate.
  - 5) Recognizes and describes the indication of station passage, if appropriate.
  - 6) Recognizes signal loss and takes appropriate action.
  - 7) Uses proper communication procedures when utilizing radar services.
-

- 8) Maintains the appropriate altitude,  $\pm 200$  feet (60 meters) and headings  $\pm 15^\circ$ .

### 9.3 TASK: DIVERSION

Applicable To: ASEL, ASES

*Objective..* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to diversion.
- 2) Selects an appropriate alternate airport and route.
- 3) Makes an accurate estimate of heading, groundspeed, arrival time, and fuel consumption to the alternate airport.
- 4) Maintains the appropriate altitude,  $\pm 200$  feet (60 meters) and heading,  $\pm 15^\circ$ .

### 9.4 TASK: LOST PROCEDURES

Reference: ASEL, ASES

*Objective..* To determine that the applicant—

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

## SECTION 10 AREA OF OPERATION: SLOW FLIGHT & STALLS

### 10.1 TASK: MANEUVERING DURING SLOW FLIGHT

Applicable To: ASEL, ASES

*Objective..* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to maneuvering during slow flight.
- 2) Selects an entry altitude that will allow the task to be completed no lower than 1,500 feet (460 meters) AGL.
- 3) Establishes and maintains an airspeed at which any further increase in angle of attack, increase in load factor, or reduction in power, would result in an immediate stall.
- 4) Accomplishes coordinated straight-and-level flight, turns, climbs, and descents with landing gear and flap configurations specified by the examiner.
- 5) Divides attention between aeroplane control and orientation.
- 6) Maintains the specified altitude,  $\pm 100$  feet (30 meters); specified heading,  $\pm 10^\circ$ ; airspeed,  $+10/-0$  knots; and specified angle of bank,  $\pm 10^\circ$ .

### 10.2 TASK: POWER-OFF STALLS

Applicable To: ASEL, ASES

*Objective..* To determine that the applicant—

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

- 2) Selects an entry altitude that allows the task to be completed no lower than 1,500 feet (460 meters) AGL.
- 3) Establishes a stabilized descent in the approach or landing configuration, as specified by the examiner.
- 4) Transitions smoothly from the approach or landing attitude to a pitch attitude that will induce a stall.
- 5) Maintains a specified heading,  $\pm 10^\circ$ , in straight flight; maintains a specified angle of bank not to exceed  $20^\circ$ ,  $\pm 10^\circ$ ; in turning flight, while inducing the stall.
- 6) Recognizes and recovers promptly after the stall occurs by simultaneously reducing the angle of attack, increasing power to maximum allowable, and leveling the wings to return to a straight- and-level flight attitude with a minimum loss of altitude appropriate for the aeroplane.
- 7) Retracts the flaps to the recommended setting; retracts the landing gear, if retractable, after a positive rate of climb is established.
- 8) Accelerates to  $V_X$  or  $V_Y$  speed before the final flap retraction; returns to the altitude, heading, and airspeed specified by the examiner.

### 10.3 TASK: POWER-ON STALLS

Applicable To: ASEL, ASES

*Objective..* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to power-on stalls.
- 2) Selects an entry altitude that allows the task to be completed no lower than 1,500 feet (460 meters) AGL.
- 3) Establishes the takeoff or departure configuration. Sets power to no less than 65 percent available power.
- 4) Transitions smoothly from the takeoff or departure attitude to the pitch attitude that will induce a stall.
- 5) Maintains a specified heading,  $\pm 10^\circ$ , in straight flight; maintains a specified angle of bank not to exceed  $20^\circ$ ,  $\pm 10^\circ$ , in turning flight, while inducing the stall.
- 6) Recognizes and recovers promptly after the stall occurs by simultaneously reducing the angle of attack, increasing power as appropriate, and leveling the wings to return to a straight-and-level flight attitude with a minimum loss of altitude appropriate for the aeroplane.
- 7) Retracts the flaps to the recommended setting; retracts the landing gear if retractable, after a positive rate of climb is established.
- 8) Accelerates to  $V_X$  or  $V_Y$  speed before the final flap retraction; returns to the altitude, heading, and airspeed specified by the examiner.

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

### 10.4 TASK: SPIN AWARENESS

Applicable To: ASEL, ASES

*Objective..* To determine that the applicant exhibits knowledge of the elements related to spin awareness by explaining—

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

## **SECTION 11 AREA OF OPERATION: BASIC INSTRUMENT MANEUVERS**

### **11.1 TASK: STRAIGHT-AND-LEVEL FLIGHT**

Applicable To: ASEL, ASES

*Objective.* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to attitude instrument flying during straight-and-level flight.
- 2) Maintains straight-and-level flight solely by reference to instruments using proper instrument cross-check and interpretation, and coordinated control application.
- 3) Maintains altitude,  $\pm 200$  feet (60 meters); heading,  $\pm 20^\circ$ ; and airspeed,  $\pm 10$  knots.

The examiner shall select task 11.5 and at least two other TASKs. from this Area of Operation.

### **11.2 TASK: CONSTANT AIRSPEED CLIMBS**

Applicable To: ASEL, ASES

*Objective.* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to attitude instrument flying during constant airspeed climbs.
- 2) Establishes the climb configuration specified by the examiner.
- 3) Transitions to the climb pitch attitude and power setting on an assigned heading using proper instrument cross-check and interpretation, and coordinated control application.
- 4) Demonstrates climbs solely by reference to instruments at a constant airspeed to specific altitudes in straight flight and turns.
- 5) Levels off at the assigned altitude and maintains that altitude,  $\pm 200$  feet (60 meters); maintains heading,  $\pm 20^\circ$ ; maintains airspeed,  $\pm 10$  knots.

### **11.3 TASK: CONSTANT AIRSPEED DESCENTS**

Applicable To: ASEL, ASES

*Objective.* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to attitude instrument flying during constant airspeed descents.
  - 2) Establishes the descent configuration specified by the examiner.
  - 3) Transitions to the descent pitch attitude and power setting on an assigned heading using proper instrument cross-check and interpretation, and coordinated control application.
  - 4) Demonstrates descents solely by reference to instruments at a constant airspeed to specific altitudes in straight flight and turns.
  - 5) Levels off at the assigned altitude and maintains that altitude,  $\pm 200$  feet (60 meters); maintains heading,  $\pm 20^\circ$ ; maintains airspeed,  $\pm 10$  knots.
-

**11.4 TASK: TURNS TO HEADINGS**

Applicable To:: ASEL, ASES

*Objective..* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to attitude instrument flying during turns to headings.
- 2) Transitions to the level-turn attitude using proper instrument cross- check and interpretation, and coordinated control application.
- 3) Demonstrates turns to headings solely by reference to instruments; maintains altitude,  $\pm 200$  feet (60 meters); maintains a standard rate turn and rolls out on the assigned heading,  $\pm 10^\circ$ ; maintains airspeed,  $\pm 10$  knots.

**11.5 TASK: RECOVERY FROM UNUSUAL FLIGHT ATTITUDES**

Applicable To:: ASEL, ASES

*Objective..* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to attitude instrument flying during unusual attitudes.
- 2) Recognizes unusual flight attitudes solely by reference to instruments; recovers promptly to a stabilized level flight attitude using proper instrument cross-check and interpretation and smooth, coordinated control application in the correct sequence.

**11.6 TASK: RADIO COMMUNICATIONS, NAVIGATION SYSTEMS/FACILITIES & RADAR SERVICES**

Applicable To:: ASEL, ASES

*Objective..* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to radio communications, navigation systems/facilities, and radar services available for use during flight solely by reference to instruments.
- 2) Selects the proper frequency and identifies the appropriate facility.
- 3) Follows verbal instructions and/or navigation systems/facilities for guidance.
- 4) Determines the minimum safe altitude.
- 5) Maintains altitude,  $\pm 200$  feet (60 meters); maintains heading,  $\pm 20^\circ$ ; maintains airspeed,  $\pm 10$  knots.

**SECTION 12 AREA OF OPERATION: EMERGENCY OPERATIONS****12.1 TASK: EMERGENCY APPROACH & LANDING (SIMULATED)**

Applicable To:: ASEL, ASES

*Objective..* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to emergency approach and landing procedures.
  - 2) Analyzes the situation and selects an appropriate course of action.
  - 3) Establishes and maintains the recommended best-glide airspeed,  $\pm 10$  knots.
-

- 4) Selects a suitable landing area.
- 5) Plans and follows a flight pattern to the selected landing area considering altitude, wind, terrain, and obstructions.
- 6) Prepares for landing, or go-around, as specified by the examiner.
- 7) Follows the appropriate checklist.

## 12.2 TASK: SYSTEMS & EQUIPMENT MALFUNCTIONS

Applicable To: ASEL, ASES

*Objective..* To determine that the applicant—

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

## 12.3 TASK: EMERGENCY EQUIPMENT & SURVIVAL GEAR

Applicable To: ASEL, ASES

*Objective..* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to emergency equipment and survival gear appropriate to the aeroplane and environment encountered during flight.
  - 2) Identifies appropriate equipment that should be aboard the aeroplane.
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## SECTION 13 AREA OF OPERATION: NIGHT OPERATION

### 13.1 TASK: NIGHT PREPARATION

Applicable To: ASEL, ASES

*Objective.* To determine that the applicant exhibits knowledge of the elements related to night operations by explaining—

- 1) Physiological aspects of night flying as it relates to vision.
- 2) Lighting systems identifying airports, runways, taxiways and obstructions, and pilot controlled lighting.
- 3) Aeroplane lighting systems.
- 4) Personal equipment essential for night flight.
- 5) Night orientation, navigation, and chart reading techniques.
- 6) Safety precautions and emergencies unique to night flying.

## SECTION 14 AREA OF OPERATION: POST-FLIGHT PROCEDURES

### 14.1 TASK: AFTER LANDING, PARKING & SECURING

Applicable To: ASEL, ASES

*Objective.* To determine that the applicant—

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

The examiner shall select TASK 14,1  
For ASES applicants at least one other TASK  
from this Area of Operation.

### 14.2 TASK: ANCHORING

Applicable To: ASES

*Objective.* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to anchoring.
  - 2) Selects a suitable area for anchoring, considering seaplane movement, water depth, tide, wind, and weather changes.
  - 3) Uses an adequate number of anchors and lines of sufficient strength and length to ensure the seaplane's security.
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**14.3 TASK: DOCKING & MOORING**

Applicable To:: ASES

*Objective..* To determine that the applicant—

- 1) Exhibits knowledge of the elements related to docking and mooring.
- 2) Approaches the dock or mooring buoy in the proper direction considering speed, hazards, wind, and water current.
- 3) Ensures seaplane security.

**14.4 TASK: RAMPING/BEACHING**

Applicable To:: ASES

*Objective..* To determine that the applicant—

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

*End of Skill Test Standard*

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