EGYPTIAN CIVIL AVIATION AUTHORITY
FLIGHT SAFETY STANDARDS SECTOR

PRIVATE PILOT
ECA Examination Standards
for
AIRPLANE

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FOREWORD

The Private Pilot - Airplane ECA Examination Standards book has been published by the Egyptian Civil Aviation Supervisory Authority (ECAA) to establish the standards for the private pilot certification practical tests for the airplane category and the single-engine, land and sea; multiengine, land and sea classes. ECAA inspectors and designated pilot examiners shall conduct practical tests in compliance with these standards. Flight instructors and applicants should find these standards helpful during training and when preparing for the practical test.

INTRODUCTION

The Flight Safety Standards Sector of the ECAA has developed this practical test book as a standard to be used by ECAA inspectors and designated pilot examiners when conducting pilot practical tests. Flight instructors are expected to use this book when preparing applicants for practical tests.

The ECAA gratefully acknowledges the valuable assistance provided by organizations and individuals who have contributed their time and talent in the development and revision of the Private Pilot ECA Examination Standards.

PRACTICAL TEST CONCEPT

Egyptian civil Aviation Regulations (ECARs) specify the areas in which knowledge and skill shall be demonstrated by the applicant before the issuance of a pilot certificate. The ECARs provide the flexibility to permit the ECAA to publish ECA Examination Standards containing specific TASKS in which pilot

competency shall be demonstrated. The ECAA will revise this book whenever it is determined that changes are needed in the interest of safety. Adherence to the regulations and the ECA Examination Standards is mandatory for the evaluation of pilot applicants.

ECA EXAMINATION STANDARDS BOOK DESCRIPTION

This test book contains the following private pilot ECA Examination Standards:

For Airplane, Single-Engine Land

The Private Pilot ECA Examination Standards include the AREAS OF OPERATION and TASKS for the issuance of an initial private pilot certificate and for the addition of category and/or class ratings to that certificate.

ECA EXAMINATION STANDARDS DESCRIPTION

AREAS OF OPERATION are phases of the practical test arranged in a logical sequence within each standard. They begin with Preflight Preparation, and end with Postflight Procedures. The examiner, however, may conduct the practical test in any sequence that results in a complete and efficient test. The Roman numerals preceding each AREA OF OPERATION relate that AREA OF OPERATION to the corresponding regulatory requirement.

TASKS are knowledge areas, flight procedures and/or maneuvers appropriate to an AREA OF OPERATION.

The 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 reference. Publications other than those listed may be used for reference if their content conveys substantially the same meaning as the referenced publications.

References upon which this practical test book is based include:

ECAR Part 43 - Maintenance, Preventive Maintenance, Rebuilding, and Alteration
ECAR Part 61 - Certification: Pilots and Flight Instructors
ECAR Part 91 - General Operating and Flight Rules
ECAR Part 97 - Standard Instrument Approach Procedures
NTSB Part 830 - Notification and Reporting of Aircraft Accidents and Incidents
AC 00-2 - Advisory Circular Checklist
AC 00-6 - Aviation Weather
AC 00-45 - Aviation Weather Services
AC 61-21 - Flight Training Handbook
AC 61-23 - Pilot's Handbook of Aeronautical Knowledge
AC 61-27 - Instrument Flying Handbook

AC 61-65 - Certification: Pilots and Flight Instructors
AC 61-67 - Stall Spin Awareness Training
AC 61-84 - Role of Preflight Preparation
AC 67-2 - Medical Handbook for Pilots
AC 90-48 - Pilots' Role in Collision Avoidance
AC 91-23 - Pilot's Weight and Balance Handbook
AC 91-69 - Seaplane Safety for ECAR Part 91 Operations
AC 120-51 - Crew Resource Management Training
AIP – Aeronautical Information publications
NOTAMs - Notices to Airmen
Pilot Operating Handbooks
ECAA-Approved Flight Manuals

The Objective lists the important 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;
2. the conditions under which the TASK is to be performed; and
3 the minimum acceptable standards of performance.

Information considered directive in nature is described in this practical test standard in terms such as "**shall**" and "**must,**" and means that the actions are mandatory. Terms such as "**will,**" "**should,**" or "may," provide guidance and describe actions that are desirable, permissive, or not mandatory and allow for flexibility.

USE OF THE ECA EXAMINATION STANDARDS

The ECAA requires that each Private Pilot practical test be conducted in accordance with the appropriate Private Pilot Practical Test Standard and the policies set forth in this INTRODUCTION. Private pilot applicants shall be evaluated in ALL TASKS included in each AREA OF OPERATION of the appropriate practical test standard.

In preparation for the practical test, the examiner shall develop a written "plan of action." The "plan of action" shall include all TASKS in each AREA OF OPERATION. Any TASK selected shall be evaluated in its entirety. However, if the elements in one TASK have already been evaluated in another TASK, they need not be repeated.

The examiner may, for any valid reason, elect to evaluate certain TASKS orally. Such TASKS include those that are impracticable, such as night flying.

The examiner is not required to follow the precise order in which the AREAS OF OPERATION and TASKS appear in this book. The examiner may change the sequence or combine TASKS with similar Objectives to meet the orderly,

efficient flow of a well-run practical test. For example, a rectangular course may be combined with an airport traffic pattern. However, the Objectives of all TASKS must be demonstrated and evaluated at some time during the practical test.

Examiners shall place special emphasis upon those aircraft operations that are most critical to flight safety. Among these areas are precise aircraft control and sound judgment in decision making. Although these areas may or may not be shown under each TASK, they are essential to flight safety and shall receive careful evaluation throughout the practical test. If these areas are shown in the Objective, additional emphasis shall be placed on them.

THE EXAMINER SHALL ALSO EMPHASIZE STALL/SPIN AWARENESS, SPATIAL DISORIENTATION, WAKE TURBULENCE AVOIDANCE, LOW LEVEL WIND SHEAR, INFLIGHT COLLISION AVOIDANCE, RUNWAY INCURSION AVOIDANCE, AND CHECKLIST USAGE.

In the performance of simulated emergency procedures, consideration must always be given to local conditions, including weather and terrain. If the procedure being evaluated would jeopardize safety, the examiner shall simulate that portion of the TASK.

PRIVATE PILOT PRACTICAL TEST PREREQUISITES

An applicant for the private pilot practical test is required by Egyptian civil Aviation Regulations to:

1. pass the appropriate pilot knowledge test since the beginning of the 24th month before the month in which the practical test is taken;
2. obtain the applicable instruction and aeronautical experience, certificated aircraft for the practical test. The aircraft must be equipped for, and its operating limitations must not prohibit, the performance of all TASKS required on the test. prescribed for the pilot certificate or rating sought;
3. possess a current medical certificate appropriate to the certificate or rating sought;
4. meet the age requirement for the issuance of the certificate or rating sought; and
5. obtain a written statement from an appropriately certificated flight instructor certifying that the applicant has been given flight instruction in preparation for the practical test within 60 days preceding the date of application. The statement shall also state that the instructor finds the applicant competent to pass the practical 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.

AIRCRAFT AND EQUIPMENT REQUIRED FOR THE PRACTICAL TEST

The private pilot applicant is required by ECAR to provide an appropriate, airworthy USE OF DISTRACTIONS DURING PRACTICAL TESTS

Numerous studies indicate that many accidents have occurred when the pilot has been distracted during critical phases of flight. To strengthen this area of pilot training and evaluation, the examiner shall provide a realistic distraction during the flight portion of the practical test. This will give the examiner a positive opportunity to evaluate the applicant's ability to divide attention, both inside and outside the cockpit, while maintaining safe flight.

APPLICANT'S USE OF CHECKLISTS

Throughout the practical test standard the applicant is evaluated on using the checklist. Its proper use is dependent on the specific TASK being evaluated. The situation may be such that the use of the checklist, while accomplishing the elements of the 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 met, would be appropriate. In any case, use of the checklist must consider proper scanning and division of attention at all times.

STABILIZED APPROACH

The term "STABILIZED APPROACH" as used in this practical test standard is not intended to be construed in the same context as the term utilized in large aircraft operation. The term as utilized in this book means that the aircraft is in a position where minimum input of all controls will result in a safe landing. Excessive control input at any point could be an indication of improper planning.

CREW RESOURCE MANAGEMENT (CRM)

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: dispatchers, cabin crewmembers, maintenance personnel, and air traffic controllers." CRM is not a single TASK, it is a set of skill competencies that must be evident in all TASKS in this as applied to either single pilot or a crew operation.

METRIC CONVERSION INITIATIVE

To assist pilots in understanding and using the metric measurement system, the ECA Examination Standards refer to the metric equivalent of various

altitudes throughout. The inclusion of meters is intended to familiarize pilots with its use. The metric altimeter is arranged in 10 meter increments; therefore, when converting from feet to meters, the exact conversion, being too exact for practical purposes, is rounded to the nearest 10 meter increment or even altitude as necessary.

MANUFACTURER'S RECOMMENDATION

The term "recommended" refers to the manufacturer's recommendation. If the manufacturer's recommendation is not available, the description in AC 61-21 shall be used.

SPECIFIED BY THE EXAMINER

Use of the word "**specified**" means as specified by the examiner.

EXAMINER RESPONSIBILITY

The examiner conducting the practical test is responsible for determining that the applicant meets the acceptable standards of knowledge and skill outlined in the Objective of each TASK within the appropriate practical test standard. Since there is no formal division between the "knowledge" and "skill" portions of the practical test, oral questioning becomes an ongoing process throughout the test. Oral questioning, to determine the applicant's knowledge of the TASKS and related safety factors, should be used judiciously at all times, especially during the flight portion of the practical test.

Examiners shall test to the greatest extent practicable the applicant's correlative abilities rather than mere rote enumeration of facts throughout the practical test.

Throughout the flight portion of the practical test, the examiner shall evaluate the applicant's procedures for visual scanning, inflight collision avoidance, runway incursion avoidance, and positive exchange of flight controls.

1 The word "examiner" denotes either the ECAA inspector or ECAA designated pilot examiner who conducts the flight test.

FLIGHT INSTRUCTOR RESPONSIBILITY

An appropriately rated flight instructor is responsible for training the student to acceptable standards in all knowledge areas, procedures, and maneuvers as outlined in the Objective of each TASK within the appropriate Private Pilot Practical Test Standard. Because of the impact of their teaching activities in developing safe, proficient pilots, flight instructors should exhibit a high level of knowledge and 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 private pilot and is competent to pass the required practical test for the certificate or rating sought.

Throughout the applicant's training, the flight instructor is responsible for emphasizing effective visual scanning, and inflight collision and runway incursion avoidance, and the positive exchange of flight controls. These areas are covered, in part, in AC 90-48, Pilots' Role in Collision Avoidance; AC 61-21, Flight Training Handbook; AC 61-23, Pilot's Handbook of Aeronautical Knowledge; and the Airman's Information Manual.

SATISFACTORY PERFORMANCE

Satisfactory performance is based on the applicant's ability to safely:

1. perform the approved AREAS OF OPERATION for the certificate or rating sought within the approved standards;
2. demonstrate mastery of the aircraft with the successful outcome of each task performed never seriously in doubt;
3. demonstrate satisfactory proficiency and competency within the approved standards;
4. demonstrate sound judgment; and
5. demonstrate single-pilot competence if the aircraft is type certificated for single-pilot operations.

UNSATISFACTORY PERFORMANCE

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. The examiner or applicant may discontinue the test any time after the failure of an AREA OF OPERATION makes the applicant ineligible for the certificate or rating sought. The test will be continued ONLY with the consent of the applicant. Whether the test is continued or discontinued, the applicant is entitled credit for only those TASKS satisfactorily performed. However, during the retest and at the discretion of the examiner, any TASK may be re-evaluated, including those previously passed.

Typical areas of unsatisfactory performance and grounds for disqualification are:

1. Any action or lack of action by the applicant which 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 Objectives.
4. Failure to take prompt corrective action when tolerances are exceeded.

When a disapproval notice is issued, the examiner will record the applicant's unsatisfactory performance in terms of the AREA OF OPERATION appropriate to the practical test conducted.

AIRPLANE SINGLE-ENGINE LAND (ASEL)
Practical Test Standard

APPLICANT'S PRACTICAL 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, ECAA-Approved Airplane Flight Manual
__ FCC Station License

PERSONAL EQUIPMENT

__ View-Limiting Device
__ Current Aeronautical Charts
__ Computer and Plotter
__ Flight Plan Form
__ Flight Logs
__ Current AIP, Airport Facility Directory, and Appropriate Publications

PERSONAL RECORDS

__ Identification - Photo/Signature ID
__ Pilot Certificate
__ Current and Appropriate Medical Certificate
__ Completed ECAA Form 8710-1, Airman Certificate and/or Rating Application with Instructor's Signature (if applicable)
__ AC Form 8080-2, Airman Written Test Report, or Computer Test Report
__ Pilot Logbook with Appropriate Instructor Endorsements
__ ECAA Form 8060-5, Notice of Disapproval (if applicable)
__ Approved School Graduation Certificate (if applicable)

__ Examiner's Fee (if applicable)

EXAMINER'S PRACTICAL TEST CHECKLIST
(ASEL)

APPLICANT'S NAME_____
LOCATION_____
DATE/TIME_____

I. PREFLIGHT PREPARATION

__ A. CERTIFICATES AND DOCUMENTS
__ B. WEATHER INFORMATION
__ C. CROSS-COUNTRY FLIGHT PLANNING
__ D. NATIONAL AIRSPACE SYSTEM
__ E. PERFORMANCE AND LIMITATIONS
__ F. OPERATION OF SYSTEMS
__ G. MINIMUM EQUIPMENT LIST
__ H. AEROMEDICAL FACTORS

II. PREFLIGHT PROCEDURES

__ A. PREFLIGHT INSPECTION
__ B. COCKPIT MANAGEMENT
__ C. ENGINE STARTING
__ D. TAXIING
__ E. BEFORE TAKEOFF CHECK

III. AIRPORT OPERATIONS

__ A. RADIO COMMUNICATIONS AND ATC LIGHT SIGNALS
__ B. TRAFFIC PATTERNS
__ C. AIRPORT AND RUNWAY MARKINGS AND LIGHTING

IV. TAKEOFFS, LANDINGS, AND GO-AROUNDS

__ A. NORMAL AND CROSSWIND TAKEOFF AND CLIMB
__ B. NORMAL AND CROSSWIND APPROACH AND LANDING
__ C. SOFT-FIELD TAKEOFF AND CLIMB
__ D. SOFT-FIELD APPROACH AND LANDING
__ E. SHORT-FIELD TAKEOFF AND CLIMB
__ F. SHORT-FIELD APPROACH AND LANDING
__ G. FORWARD SLIP TO A LANDING
__ H. GO-AROUND

V. PERFORMANCE MANEUVER

__ STEEP TURNS

VI. GROUND REFERENCE MANEUVERS

__ A. RECTANGULAR COURSE
__ B. S-TURNS
__ C. TURNS AROUND A POINT

VII. NAVIGATION

__ A. PILOTAGE AND DEAD RECKONING
__ B. NAVIGATION SYSTEMS AND RADAR SERVICES
__ C. DIVERSION
__ D. LOST PROCEDURES

VIII. SLOW FLIGHT AND STALLS

__ A. MANEUVERING DURING SLOW FLIGHT
__ B. POWER-OFF STALLS
__ C. POWER-ON STALLS
__ D. SPIN AWARENESS

IX. BASIC INSTRUMENT MANEUVERS

__ A. STRAIGHT-AND-LEVEL FLIGHT
__ B. CONSTANT AIRSPEED CLIMBS
__ C. CONSTANT AIRSPEED DESCENTS
__ D. TURNS TO HEADINGS
__ E. UNUSUAL FLIGHT ATTITUDES
__ F. RADIO COMMUNICATIONS, NAVIGATION SYSTEMS / FACILITIES, AND RADAR SERVICES

X. EMERGENCY OPERATIONS

__ A. EMERGENCY DESCENT
__ B. EMERGENCY APPROACH AND LANDING
__ C. SYSTEMS AND EQUIPMENT MALFUNCTIONS
__ D. EMERGENCY EQUIPMENT AND SURVIVAL GEAR

XI. NIGHT OPERATIONS

__ A. NIGHT PREPARATION
__ B. NIGHT FLIGHT

XII. POSTFLIGHT PROCEDURES

__ A. AFTER LANDING

__ B. PARKING AND SECURING

I. AREA OF OPERATION: PREFLIGHT PREPARATION

A. TASK: CERTIFICATES AND DOCUMENTS

REFERENCES: ECAR Parts 43, 61, 91; AC 61-21, AC 61-23; Pilot's Operating Handbook, ECAA-Approved Airplane Flight Manual.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to certificates and documents by explaining the appropriate
   a. pilot certificate, privileges and limitations.
   b. medical certificate, class and duration.
   c. pilot logbook or flight record, required entries.
2. Exhibits knowledge of the elements related to certificates and documents by locating and explaining the
   a. airworthiness and registration certificates.
   b. operating limitations, placards, instrument markings, handbooks, and manuals.
   c. weight and balance data, including the equipment list.
   d. airworthiness directives and compliance records, maintenance requirements, tests, and appropriate records.

B. TASK: WEATHER INFORMATION

REFERENCES: AC 00-6, AC 00-45, AC 61-23, AC 61-84; AIP.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to weather information by analyzing weather reports and forecasts from various sources with emphasis on
   a. PIREPs.
   b. SIGMETs and AIRMETs.
   c. wind shear reports.
2. Makes a competent "go/no-go" decision based on available weather information.

C. TASK: CROSS-COUNTRY FLIGHT PLANNING

REFERENCES: AC 61-21, AC 61-23, AC 61-84; Navigation Charts; Airport/Facility Directory; AIP.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to cross-country flight planning by presenting and explaining a preplanned VFR cross-country flight near the maximum range of the airplane, as previously assigned by

the examiner. The final flight plan shall include real-time weather to the first fuel stop, with maximum allowable passenger and baggage loads.
2. Uses appropriate, current aeronautical charts.
3. Plots a course for the intended route of flight.
4. Identifies airspace, obstructions, and terrain features.
5. Selects easily identifiable en route checkpoints.
6. Selects the most favorable altitudes, considering weather conditions and equipment capabilities.
7. Computes headings, flight time, and fuel requirements.
8. Selects appropriate navigation systems/facilities and communication frequencies.
9. Confirms availability of alternate airports.
10. Extracts and records pertinent information from NOTAMs, the Airport/Facility Directory, and other flight publications.
11. Completes a navigation log and simulates filing a VFR flight plan.

D. TASK: NATIONAL AIRSPACE SYSTEM

REFERENCES: ECAR Parts 71, 91; Navigation Charts; AIP.

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 boundaries, pilot certification, and airplane equipment requirements for the following
   a. Class A.
   b. Class B.
   c. Class C.
   d. Class D.
   e. Class E.
   f. Class G.
3. Special use airspace and other airspace areas.

E. TASK: PERFORMANCE AND LIMITATIONS

REFERENCES: AC 61-21, AC 61-23, AC 61-84, AC 91-23; Pilot's Operating Handbook, ECAA-Approved Airplane Flight Manual.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to performance and limitations by explaining the use of charts, tables, and data, if available from the manufacturer, to determine performance, including takeoff, climb, cruise, range, and endurance, and the adverse effects of exceeding limitations.
2. Computes weight and balance, including adding, removing, and shifting weight. Determines if the weight and center of gravity will remain within limits during all phases of flight.
3. Describes the effects of atmospheric conditions on the airplane's performance.
4. Determines whether the computed performance is within the airplane's capabilities and operating limitations.

F. TASK: OPERATION OF SYSTEMS

REFERENCES: AC 61-21, AC 61-23; Pilot's Operating Handbook, ECAA-Approved Airplane Flight Manual.

Objective. To determine that the applicant exhibits knowledge of the elements related to the operation of systems on the airplane provided for the flight test by explaining at least three of the following:

1. Primary flight controls and trim.
2. Flaps, leading edge devices, and spoilers.
3. Powerplant.
4. Propeller.
5. Landing gear.
6. Fuel, oil, and hydraulic systems.
7. Electrical system.
8. Pitot-static system, vacuum/pressure system and associated flight instruments.
9. Environmental system.
10. Deicing and anti-icing systems.
11. Avionics system.

G. TASK: MINIMUM EQUIPMENT LIST

REFERENCE: ECAR Part 91.

Objective. To determine that the applicant exhibits knowledge of the elements related to the use of an approved Part 91 minimum equipment list by explaining:

1. Required instruments and equipment for day VFR and night VFR flight.
2. Procedures for operating the airplane with inoperative instruments and equipment.
3. Requirements and procedures for obtaining a special flight permit.

H. TASK: AEROMEDICAL FACTORS

REFERENCES: AC 61-21, AC 67-2; AIP.

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

II. AREA OF OPERATION: PREFLIGHT PROCEDURES

A. TASK: PREFLIGHT INSPECTION

REFERENCES: AC 61-21; Pilot's Operating Handbook, ECAA-Approved Airplane Flight Manual.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to preflight inspection. This shall include which items must be inspected, the reasons for checking each item, and how to detect possible defects.
2. Inspects the airplane with reference to the checklist.

3. Verifies the airplane is in condition for safe flight.

B. TASK: COCKPIT MANAGEMENT

REFERENCES: AC 61-21; Pilot's Operating Handbook, ECAA-Approved Airplane Flight Manual.

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. Briefs passengers on the use of safety belts, shoulder harnesses, and emergency procedures.
4. Organizes material and equipment in a logical, efficient flow pattern.
5. Utilizes all appropriate checklists.

C. TASK: ENGINE STARTING

REFERENCES: AC 61-21, AC 61-23, AC 91-13, AC 91-55; Pilot's Operating Handbook, ECAA-Approved Airplane Flight Manual.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to engine starting. This shall include the use of an external power source and starting under various atmospheric conditions, as appropriate.
2. Positions the airplane properly considering open hangars, other aircraft, the safety of nearby persons and property on the ramp, and surface conditions.
3. Accomplishes the correct starting procedure.
4. Completes the appropriate checklist.

D. TASK: TAXIING

REFERENCES: AC 61-21; Pilot's Operating Handbook, ECAA-Approved Airplane Flight Manual.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to safe taxi procedures.
2. Positions the flight controls properly for the existing wind conditions.

3. Performs a brake check immediately after the airplane begins moving.
4. Controls direction and speed without excessive use of brakes.
5. Complies with airport markings, signals, and ATC clearances.
6. Avoids other aircraft and hazards.
7. Completes the appropriate checklist.

E. TASK: BEFORE TAKEOFF CHECK

REFERENCES: AC 61-21; Pilot's Operating Handbook, ECAA-Approved Airplane Flight Manual.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to the before takeoff check. This shall include the reasons for checking each item and how to detect malfunctions.
2. Positions the airplane properly considering other aircraft, 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 check and confirms that the airplane is in safe operating condition.
6. Reviews takeoff performance airspeeds, takeoff distances, emergency procedures, and the departure procedure.
7. Assures no conflict with traffic prior to taxiing into takeoff position.
8. Completes the appropriate checklist.

III. AREA OF OPERATION: AIRPORT OPERATIONS

A. TASK: RADIO COMMUNICATIONS AND ATC LIGHT SIGNALS

REFERENCES: AC 61-21, AC 61-23; AIP.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to radio communications and ATC light signals. This shall include radio failure procedures.
2. Selects appropriate frequencies.
3. Transmits using recommended phraseology.

4. Acknowledges radio communications and complies with instructions.
5. Uses prescribed procedures following radio communications failure.
6. Interprets and complies with ATC light signals.

B. TASK: TRAFFIC PATTERNS

REFERENCES: AC 61-21, AC 61-23; AIP.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to traffic patterns. This shall include procedures at controlled and uncontrolled airports, runway incursion and collision avoidance, wake turbulence avoidance, and wind shear.
2. Complies with traffic pattern procedures.
3. Maintains proper spacing from other traffic.
4. Establishes an appropriate distance from the runway, considering the possibility of an engine failure.
5. Corrects for wind drift to maintain the proper ground track.
6. Maintains orientation with the runway in use.
7. Maintains traffic pattern altitude, ±100 feet (30 meters), and the appropriate airspeed, ±10 knots.
8. Completes the appropriate checklist.

C. TASK: AIRPORT AND RUNWAY MARKINGS AND LIGHTING

REFERENCES: AC 61-21, AC 61-23; AIP.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to airport and runway markings and lighting.
2. Identifies and interprets airport, runway and taxiway markings and lighting.

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

A. TASK: NORMAL AND CROSSWIND TAKEOFF AND CLIMB

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

REFERENCES: AC 61-21; Pilot's Operating Handbook, ECAA-Approved Airplane Flight Manual.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a normal and crosswind takeoff and climb.
2. Positions the flight controls for the existing wind conditions; sets the flaps as recommended.
3. Clears the area; taxies into the takeoff position and aligns the airplane on the runway centerline.
4. Advances the throttle smoothly to takeoff power.
5. Rotates at the recommended airspeed, lifts off, and accelerates to VY.
6. Establishes the pitch attitude for VY and maintains VY, +10/-5 knots, during the climb.
7. Retracts the landing gear, if retractable, and flaps after a positive rate of climb is established.
8. Maintains takeoff power to a safe maneuvering altitude.
9. Maintains directional control and proper wind-drift correction throughout the takeoff and climb.
10. Complies with noise abatement procedures.
11. Completes the appropriate checklist.

B. TASK: NORMAL AND CROSSWIND APPROACH AND LANDING

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

REFERENCES: AC 61-21; Pilot's Operating Handbook, ECAA-Approved Airplane Flight Manual.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a normal and crosswind approach and landing.
2. Considers the wind conditions, landing surface and obstructions, and selects the most suitable touchdown point.
3. Establishes the recommended approach and landing configuration and airspeed, and adjusts pitch attitude and power as required.
4. Maintains a stabilized approach and the recommended approach airspeed, or in its absence, not more than 1.3 Vs0, +10/-5 knots, with gust factor applied.

5. Makes smooth, timely, and correct control application during the groundout and touchdown.
6. Touches down smoothly at the approximate stalling speed, at or within 400 feet (120 meters) beyond a specified point, with no drift, and with the airplane's longitudinal axis aligned with and over the runway centerline.
7. Maintains crosswind correction and directional control throughout the approach and landing.
8. Completes the appropriate checklist.

C. TASK: SOFT-FIELD TAKEOFF AND CLIMB

REFERENCES: AC 61-21; Pilot's Operating Handbook, ECAA-Approved Airplane Flight Manual.

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 the existing wind conditions and so as to maximize lift as quickly as possible; sets the flaps as recommended.
3. Clears the area; taxies onto the takeoff surface at a speed consistent with safety and aligns the airplane without stopping while advancing the throttle smoothly to takeoff power.
4. Establishes and maintains the pitch attitude that will transfer the weight of the airplane from the wheels to the wings as rapidly as possible.
5. Lifts off and remains in ground effect while accelerating to VY.
6. Establishes the pitch attitude for VY and maintains VY, +10/-5 knots, during the climb.
7. Retracts the landing gear, if retractable, and flaps after a positive rate of climb is established.
8. Maintains takeoff power to a safe maneuvering altitude.
9. Maintains directional control and proper wind-drift correction throughout the takeoff and climb.
10. Complies with noise abatement procedures.
11. Completes the appropriate checklist.

D. TASK: SOFT-FIELD APPROACH AND LANDING

REFERENCES: AC 61-21; Pilot's Operating Handbook, ECAA-Approved Airplane Flight Manual.

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 point.
3. Establishes the recommended approach and landing configuration and airspeed, and adjusts pitch attitude and power as required.
4. Maintains a stabilized approach and the recommended approach airspeed, or in its absence not more than 1.3 Vs0, +10/-5 knots, with gust factor applied.
5. Makes smooth, timely, and correct control application during the roundout and touchdown.
6. Touches down smoothly with no drift, and with the airplane's longitudinal axis aligned with and over the runway centerline.
7. Maintains the correct position of the flight controls and sufficient speed to taxi on the soft surface.
8. Maintains crosswind correction and directional control throughout the approach and landing.
9. Completes the appropriate checklist.

E. TASK: SHORT-FIELD TAKEOFF AND CLIMB

REFERENCES: AC 61-21; Pilot's Operating Handbook, ECAA-Approved Airplane Flight Manual.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a short-field takeoff and climb.
2. Positions the flight controls for the existing wind conditions; sets the flaps as recommended.
3. Clears the area; taxies into the takeoff position so as to allow maximum utilization of available takeoff area and aligns the airplane on the runway centerline.
4. Advances the throttle smoothly to takeoff power.
5. Rotates at the recommended airspeed, lifts off and accelerates to the recommended obstacle clearance airspeed or Vx.
6. Establishes the pitch attitude for the recommended obstacle clearance airspeed, or Vx, and maintains that airspeed, +10/-5 knots, until the

obstacle is cleared, or until the airplane is 50 feet (20 meters) above the surface.

7. After clearing the obstacle, accelerates to VY, establishes the pitch attitude for VY, and maintains VY, +10/-5 knots, during the climb.
8. Retracts the landing gear, if retractable, and flaps after a positive rate of climb is established.
9. Maintains takeoff power 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.

F. TASK: SHORT-FIELD APPROACH AND LANDING

REFERENCES: AC 61-21; Pilot's Operating Handbook, ECAA-Approved Airplane Flight Manual.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a short-field approach and landing.
2. Considers the wind conditions, landing surface and obstructions, and selects the most suitable touchdown point.
3. Establishes the recommended approach and landing configuration and airspeed, and adjusts pitch attitude and power as required.
4. Maintains a stabilized approach and the recommended approach airspeed, or in its absence not more than 1.3 Vs0, +10/-5 knots, with gust factor applied.
5. Makes smooth, timely, and correct control application during the roundout and touchdown.
6. Touches down smoothly at the approximate stalling speed, at or within 200 feet (60 meters) beyond a specified point, with no side drift, and with the airplane's longitudinal axis aligned with and over the runway centerline.
7. Applies brakes, as necessary, to stop in the shortest distance consistent with safety.
8. Maintains crosswind correction and directional control throughout the approach and landing.
9. Completes the appropriate checklist.

G. TASK: FORWARD SLIP TO A LANDING

REFERENCES: AC 61-21; Pilot's Operating Handbook, ECAA-Approved Airplane Flight Manual.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a 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 centerline 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 airplane's longitudinal axis aligned with and over the runway centerline.
7. Maintains crosswind correction and directional control throughout the approach and landing.
8. Completes the appropriate checklist.

H. TASK: GO-AROUND

REFERENCES: AC 61-21; Pilot's Operating Handbook, ECAA-Approved Airplane Flight Manual.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a go-around.
2. Makes a timely decision to discontinue the approach to landing.
3. Applies takeoff power immediately and transitions to the climb pitch attitude for VY,+10/-5 knots.
4. Retracts the flaps to the approach setting, if applicable.
5. Retracts the landing gear, if retractable, after a positive rate of climb is established.

6. Maintains takeoff power to a safe maneuvering altitude, then sets power and transitions to the airspeed appropriate for the traffic pattern.
7. Maintains directional control and proper wind-drift correction throughout the climb.
8. Complies with noise abatement procedures, as appropriate.
9. Flies the appropriate traffic pattern.
10. Completes the appropriate checklist.

V. AREA OF OPERATION: PERFORMANCE MANEUVER

TASK: STEEP TURNS

REFERENCES: AC 61-21; Pilot's Operating Handbook, ECAA-Approved Airplane Flight Manual.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to steep turns.
2. Selects an altitude that will allow the task to be performed no lower than 1,500 feet (460 meters) AGL.
3. Establishes the manufacturer's recommended airspeed or if one is not stated, the examiner may designate a safe airspeed not to exceed VA.
4. Rolls into a coordinated 360 turn; maintains a 45 bank, ±5 ; and rolls out on the entry heading, ±10 .
5. Performs the task in the opposite direction, as specified by the examiner.
6. Divides attention between airplane control and orientation.
7. Maintains the entry altitude, ±100 feet (30 meters), and airspeed, ±10 knots.

VI. AREA OF OPERATION: GROUND REFERENCE MANEUVERS

A. TASK: RECTANGULAR COURSE

REFERENCE: AC 61-21.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a rectangular course.
2. Determines the wind direction and speed.
3. Selects the ground reference area with an emergency landing area within gliding distance.

4. Plans the maneuver so as to enter at traffic pattern altitude, at an appropriate distance from the selected reference area, 45 to the downwind leg, with the first circuit to the left.
5. Applies adequate wind-drift correction during straight-and-turning flight to maintain a constant ground track around the rectangular reference area.
6. Divides attention between airplane control and the ground track and maintains coordinated flight.
7. Exits at the point of entry at the same altitude and airspeed at which the maneuver was started, and reverses course as directed by the examiner.
8. Maintains altitude, ±100 feet (30 meters); maintains airspeed, ±10 knots.

B. TASK: S-TURNS

REFERENCE: AC 61-21.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to S-turns.
2. Determines the wind direction and speed.
3. Selects the reference line with an emergency landing area within gliding distance.
4. Plans the maneuver so as to enter at 600 to 1,000 feet (180 to 300 meters) AGL, perpendicular to the selected reference line, downwind, with the first series of turns to the left.
5. Applies adequate wind-drift correction to track a constant radius half-circle on each side of the selected reference line.
6. Divides attention between airplane control and the ground track and maintains coordinated flight.
7. Reverses course, as directed by the examiner, and exits at the point of entry at the same altitude and airspeed at which the maneuver was started.
8. Maintains altitude, ±100 feet (30 meters); maintains airspeed, ±10 knots.

C. TASK: TURNS AROUND A POINT

REFERENCE: AC 61-21.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to turns around a point.
2. Determines the wind direction and speed.

3. Selects the reference point with an emergency landing area within gliding distance.
4. Plans the maneuver so as to enter at 600 to 1,000 feet (180 to 300 meters) AGL, at an appropriate distance from the reference point, with the airplane headed downwind and the first turn to the left.
5. Applies adequate wind-drift correction to track a constant radius circle around the selected reference point with a bank of approximately 45 at the steepest point in the turn.
6. Divides attention between airplane control and the ground track and maintains coordinated flight.
7. Completes two turns, exits at the point of entry at the same altitude and airspeed at which the maneuver was started, and reverses course as directed by the examiner.
8. Maintains altitude, ±100 feet (30 meters); maintains airspeed, ±10 knots.

VII. AREA OF OPERATION: NAVIGATION

A. TASK: PILOTAGE AND DEAD RECKONING

REFERENCES: AC 61-21, AC 61-23, AC 61-84.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to pilotage and dead reckoning.
2. Follows the preplanned course solely 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 fuel, groundspeed, and heading calculations and those determined en route.
6. Verifies the airplane's position within 3 nautical miles of the flight-planned route at all times.
7. Arrives at the en route checkpoints and destination within 5 minutes of the ETA.
8. Maintains the appropriate altitude, ±200 feet (60 meters) and established heading, ±15 .
9. Completes all appropriate checklists.

B. TASK: NAVIGATION SYSTEMS AND RADAR SERVICES

REFERENCES: AC 61-21, AC 61-23; Navigation Equipment Operation Manuals.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to navigation systems and radar services.
2. Selects and identifies the appropriate navigation system/facility.
3. Locates the airplane's position using radials, bearings, or coordinates, as appropriate.
4. Interce and tracks a given radial or bearing, if 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 ATC radar services.
8. Maintains the appropriate altitude, ±200 feet (60 meters).

C. TASK: DIVERSION

REFERENCES: AC 61-21, AC 61-23.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to diversion.
2. Selects an appropriate alternate airport and route.
3. Diverts promptly toward the alternate airport.
4. Makes an accurate estimate of heading, groundspeed, arrival time, and fuel consumption to the alternate airport.
5. Maintains the appropriate altitude, ±200 feet (60 meters) and established heading, ±15 .

D. TASK: LOST PROCEDURES

REFERENCES: AC 61-21, AC 61-23.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to lost procedures.
2. Selects the best course of action when given a lost situation.
3. Maintains the original or an appropriate heading and climbs, if necessary.
4. Identifies the nearest concentration of prominent landmarks.

5. Uses navigation systems/facilities and/or contacts an ATC facility for assistance, as appropriate.
6. Plans a precautionary landing if deteriorating weather and/or fuel exhaustion is imminent.

VIII. AREA OF OPERATION: SLOW FLIGHT AND STALLS

A. TASK: MANEUVERING DURING SLOW FLIGHT

REFERENCES: AC 61-21; Pilot's Operating Handbook, ECAA-Approved Airplane Flight Manual.

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 or the recommended altitude, whichever is higher.
3. Stabilizes the airspeed at 1.2 Vs1, +10/-5 knots.
4. Accomplishes coordinated straight-and-level flight and level turns, at bank angles and in configurations, as specified by the examiner.
5. Accomplishes coordinated climbs and descents, straight and turning, at bank angles and in configurations as specified by the examiner.
6. Divides attention between airplane control and orientation.
7. Maintains the specified altitude, ±100 feet (30 meters); the specified heading, ±10 ; and the specified airspeed, +10/-5 knots.
8. Maintains the specified angle of bank, not to exceed 30 in level flight, +0/-10 ; maintains the specified angle of bank, not to exceed 20 in climbing or descending flight, +0/-10 ; rolls out on the specified heading, ±10 ; and levels off from climbs and descents within ±100 feet (30 meters).

B. TASK: POWER-OFF STALLS

REFERENCES: AC 61-21, AC 61-67; Pilot's Operating Handbook, ECAA-Approved Airplane Flight Manual.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to power-off stalls. This shall include an understanding of the aerodynamics of a stall which occurs as a

result of uncoordinated flight. Emphasis shall be placed upon recognition of and recovery from a power-off stall.

2. Selects an entry altitude that will allow the task to be completed no lower than 1,500 feet (460 meters) AGL or the recommended altitude, whichever is higher.
3. Establishes a stabilized approach in the approach or landing configuration, as specified by the examiner.
4. Transitions smoothly from the approach or landing attitude to the pitch attitude that will induce a stall.
5. Maintains a specified heading, ±10 , if in straight flight; maintains a specified angle of bank not to exceed 30, +0/-10 , if in turning flight, while inducing the stall.
6. Recognizes and announces the first aerodynamic indications of the oncoming stall, i.e., buffeting or decay of control effectiveness.
7. Recovers promptly after a stall occurs by simultaneously decreasing the pitch attitude, applying power, and leveling the wings to return to a straight-and-level flight attitude with a minimum loss of altitude appropriate for the airplane.
8. Retracts the flaps to the recommended setting; retracts the landing gear, if retractable, after a positive rate of climb is established; accelerates to VY before the final flap retraction; returns to the altitude, heading, and airspeed specified by the examiner.

C. TASK: POWER-ON STALLS

REFERENCES: AC 61-21, AC 61-67; Pilot's Operating Handbook, ECAA-Approved Airplane Flight Manual.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to power-on stalls. This shall include an understanding of the aerodynamics of a stall which occurs as a result of uncoordinated flight. Emphasis shall be placed upon recognition of and recovery from a power-on stall.
2. Selects an entry altitude that will allow the task to be completed no lower than 1,500 feet (460 meters) AGL or the recommended altitude, whichever is higher.
3. Establishes the takeoff or departure configuration, airspeed, and power as specified by the examiner.
4. Transitions smoothly from the takeoff or departure attitude to the pitch attitude that will induce a stall.

5. Maintains a specified heading, ±10 , if in straight flight; maintains a specified angle of bank not to exceed 20, +0/-10 , if in turning flight, while inducing the stall.
6. Recognizes and announces the first aerodynamic indications of the oncoming stall, i.e., buffeting or decay of control effectiveness.
7. Recovers promptly after a stall occurs by simultaneously decreasing the pitch attitude, applying 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 airplane.
8. Retracts the flaps to the recommended setting; retracts the landing gear, if retractable, after a positive rate of climb is established; accelerates to VY before the final flap retraction; returns to the altitude, heading, and airspeed specified by the examiner.

D. TASK: SPIN AWARENESS

REFERENCES: AC 61-21, AC 61-67; Pilot's Operating Handbook, ECAA-Approved Airplane Flight Manual.

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

1. Flight situations where unintentional spins may occur.
2. The technique used to recognize and recover from unintentional spins.
3. The recommended spin recovery procedure for the airplane used for the practical test.

IX. AREA OF OPERATION: BASIC INSTRUMENT MANEUVERS

A. TASK: STRAIGHT-AND-LEVEL FLIGHT

REFERENCES: AC 61-21, AC 61-27.

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, ±200 feet (60 meters); heading, ±20 ; and airspeed, ±10 knots.

B. TASK: CONSTANT AIRSPEED CLIMBS

REFERENCES: AC 61-21, AC 61-27.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to attitude instrument flying during straight, 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.
5. Levels off at the assigned altitude and maintains that altitude, ±200 feet (60 meters); maintains heading, ±20 ; maintains airspeed, ±10 knots.

C. TASK: CONSTANT AIRSPEED DESCENTS

REFERENCES: AC 61-21, AC 61-27.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to attitude instrument flying during straight, 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.
5. Levels off at the assigned altitude and maintains that altitude, ±200 feet (60 meters); maintains heading, ±20 ; maintains airspeed, ±10 knots.

D. TASK: TURNS TO HEADINGS

REFERENCES: AC 61-21, AC 61-27.

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, ±200 feet (60 meters); maintains a standard rate turn and rolls out on the assigned heading, ±20 ; maintains airspeed, ±10 knots.

E. TASK: RECOVERY FROM UNUSUAL FLIGHT ATTITUDES

REFERENCES: AC 61-21, AC 61-27.

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.

F. TASK: RADIO COMMUNICATIONS, NAVIGATION SYSTEMS / FACILITIES, AND RADAR SERVICES

REFERENCES: AC 61-21, AC 61-23, AC 61-27.

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, ±200 feet (60 meters); maintains heading, ±20 ; maintains airspeed, ±10 knots.

X. AREA OF OPERATION: EMERGENCY OPERATIONS

A. TASK: EMERGENCY DESCENT

REFERENCES: AC 61-21; Pilot's Operating Handbook, ECAA-Approved Airplane Flight Manual.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to an emergency descent.
2. Recognizes the urgency of an emergency descent.
3. Establishes the recommended emergency descent configuration and airspeed, and maintains that airspeed, ±5 knots.
4. Demonstrates orientation, division of attention, and proper planning.
5. Follows the appropriate emergency checklist.

B. TASK: EMERGENCY APPROACH AND LANDING

REFERENCES: AC 61-21; Pilot's Operating Handbook, ECAA-Approved Airplane Flight Manual.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to emergency approach and landing procedures.
2. Establishes and maintains the recommended best-glide attitude, configuration, and airspeed, ±10 knots.
3. Selects a suitable emergency landing area within gliding distance.
4. Plans and follows a flight pattern to the selected landing area considering altitude, wind, terrain, and obstructions.
5. Attem to determine the reason for the malfunction and makes the correction, if possible.
6. Maintains positive control of the airplane at all times.
7. Follows the appropriate emergency checklist.

C. TASK: SYSTEMS AND EQUIPMENT MALFUNCTIONS

REFERENCES: AC 61-21; Pilot's Operating Handbook, ECAA-Approved Airplane Flight Manual.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to system and equipment malfunctions appropriate to the airplane provided for the flight test.
2. Analyzes the situation and takes the appropriate action for simulated emergencies, such as
   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 system malfunction.
   g. flight instruments malfunction.
   h. landing gear or flap malfunction.
   i. inoperative trim.
   j. inadvertent door or window opening.
   k. structural icing.
   l. smoke/fire/engine compartment fire.
   m. any other emergency appropriate to the airplane provided for the flight test.
3. Follows the appropriate emergency checklist.

D. TASK: EMERGENCY EQUIPMENT AND SURVIVAL GEAR

REFERENCES: AC 61-21; Pilot's Operating Handbook, ECAA-Approved Airplane Flight Manual.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to emergency equipment and survival gear appropriate to the airplane provided for the flight test, such as
   a. location in the airplane.
   b. method of operation or use.
   c. servicing requirements.
   d. method of safe storage.
   e. equipment and survival gear appropriate for operation in various climates and topographical environments.
2. Follows the appropriate emergency checklist.

XI. AREA OF OPERATION: NIGHT OPERATIONS

NOTE: If an applicant does not meet the aeronautical experience requirements of ECAR Section 61, the applicant's certificate shall bear the limitation "Night Flying Prohibited."

A. TASK: NIGHT PREPARATION

REFERENCES: AC 61-21, AC 61-23, AC 67-2; Pilot's Operating Handbook, ECAA-Approved Airplane Flight Manual.

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

1. Physiological aspects of night flying including the effects of changing light conditions, coping with illusions, and how the pilot's physical condition affects visual acuity.
2. Lighting systems identifying airports, runways, taxiways and obstructions, and pilot controlled lighting.
3. Airplane lighting systems.
4. Personal equipment essential for night flight.
5. Night orientation, navigation, and chart reading techniques.
6. Safety precautions and emergencies peculiar to night flying.

B. TASK: NIGHT FLIGHT

NOTE: The examiner shall orally evaluate element 1 and at least one of the elements, 2 through 6.

REFERENCES: AC 61-21, AC 67-2; AIP, Pilot's Operating Handbook, ECAA-Approved Airplane Flight Manual.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to night flight.
2. Inspects the interior and exterior of the airplane with emphasis on those items essential for night flight.
3. Taxies and accomplishes the before takeoff check adhering to good operating practice for night conditions.
4. Performs takeoffs and climbs with emphasis on visual references.
5. Navigates and maintains orientation under VFR conditions.
6. Approaches, lands, and taxies, adhering to good operating practices for night conditions.
7. Completes all appropriate checklists.

XII. AREA OF OPERATION: POSTFLIGHT PROCEDURES

A. TASK: AFTER LANDING

REFERENCES: AC 61-21; Pilot's Operating Handbook, ECAA-Approved Airplane Flight Manual.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to after-landing procedures.
2. Taxies to the parking/refueling area using the proper wind control technique and obstacle avoidance procedures.
3. Completes the appropriate checklist.

B. TASK: PARKING AND SECURING

REFERENCES: AC 61-21; Pilot's Operating Handbook, ECAA-Approved Airplane Flight Manual.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to parking and securing procedures. This shall include an understanding of parking hand signals and deplaning passengers.
2. Parks the airplane properly, considering other aircraft and the safety of nearby persons and property on the ramp.
3. Follows the recommended procedure for engine shutdown and securing the cockpit and the airplane.
4. Performs a satisfactory postflight inspection.
5. Completes the appropriate checklist}