



PERSONNEL
LICENSING
ADVISORY
CIRCULAR

Barbados Civil Aviation Department

BCAD Document PLAC-058

FLIGHT INSTRUCTOR-
GLIDER LICENCE
SKILL TEST STANDARDS

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**Subject: FLIGHT INSTRUCTOR – GLIDER LICENCE SKILL TEST
STANDARDS**

BCAD Advisory Circular PLAC-058

Date: 07/10/30

FOREWORD

1. (1) The BCAD has developed skill test standards for airmen licences and ratings and these are published as BCAD PL Advisory Circulars (PLACs). This PLAC establishes the standards for the flight instructor licence skill tests for the glider category BCAD inspectors and designated pilot flight test examiners shall conduct skill tests in compliance with these standards. Flight instructors and applicants should find these standards helpful in skill test preparation. Other PLACs have been developed for other airmen licences and can be obtained from the BCAD website: www.bcad.gov.bb.

(2) Terms, such as "shall" and "must" are directive in nature and when used in this document indicate that an action is mandatory. Guidance information is described in terms of "should" and "may" indicating the actions are desirable or permissive, but not mandatory.

(3) The BCAD gratefully acknowledges the valuable assistance provided by the FAA in the development of these skill test standards (STS).

(4) The Barbados Civil Aviation Regulations (BCARs) can be obtained from the Barbados Government printery, Bay Street, St. Michael Barbados. BCARS General Application& Personnel Licensing, cover the requirements for personnel licensing.

(5) This PLAC may be downloaded from the BCAD website at www.bcad.gov.bb. Subsequent changes to this PLAC will also be available on BCAD web site.

(6) Comments regarding this publication should be sent to:

The Barbados Civil Aviation Department,
Grantley Adams International Airport,
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E. A. Archer
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PURPOSE

1. The purpose of this BCAD Advisory Circular (PLAC) is to prescribe the standards that shall be used by BCAD inspectors and designated flight test examiners when conducting flight instructor - glider skill tests. Flight instructors are expected to use this document when preparing applicants for skill tests. Applicants should be familiar with this document and refer to these standards during their training.

GENERAL

2. (1) An applicant for a Barbados Flight Instructor licence is required under BCARS General Application and Personnel Licensing Regulations to demonstrate to the Authority through a skill test, his ability to perform as a pilot in command of an aircraft, the relevant procedures and manoeuvres prescribed by the BCARs, with a degree of competence appropriate to the privileges granted to the holder of a Flight Instructor Licence. This PLAC has been published by the BCAD to establish the standards for the Flight Instructor Licence skill test for the glider category. BCAD inspectors and designated flight test examiners shall conduct skill tests in compliance with these standards. Flight instructors and applicants should find these standards helpful in preparing students for the required skill test for a Barbados Flight Instructor Licence.

SKILL TEST STANDARDS CONCEPT

3. BCARS General Application & Personnel Licensing specifies the areas of operation in which knowledge and skill must be demonstrated by the applicant before the issue of a Flight Instructor licence or rating. The BCARs provide the flexibility to permit the BCAD to publish STSs containing the areas of operation and specific tasks in which pilot competency shall be demonstrated. The BCAD shall revise this STS whenever it is determined that changes are needed in the interest of safety. Adherence to the provisions of the BCARs and the STS is mandatory for the evaluation of private pilot applicants.

SKILL TEST DESCRIPTION

4. (1) This BAC contains the STS for flight instructor – glider licence. This includes the AREAS OF OPERATION and TASKS required for the issuance of an initial flight instructor— glider licence and for the addition of other aircraft category ratings.

(2) 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 postflight procedures. The examiner may conduct the skill test in any sequence that results in a complete and efficient test; however, the ground portion of the skill test shall be accomplished before the flight portion.

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

(4) The TASKS required for each additional aircraft category rating are shown in the Rating Task Table on page 16.

(5) NOTE is used to emphasize special considerations required in the AREA OF

OPERATION or TASK.

(6) REFERENCE identifies the publication(s) that describe(s) the TASK. Descriptions of TASKS are not included in the standards because this information can be found in the current issue of the listed references. Publications other than those listed may be used for references if their content conveys substantially the same meaning as the referenced publications. Many of the publications listed are publications published by the Federal Aviation Administration of the United States (FAA), and adopted by BCAD in cooperation with the FAA. The most recent version of these references should be used. The STSs are based on the following references:

BCARS	Personnel Licensing
BCARS	Airworthiness
BCARS	Aircraft Instruments and Equipment
BCARS	Operations
FAA-H-8083-25	Pilot's Handbook of Aeronautical Knowledge
FAA AC 00-6	Aviation Weather
FAAAC 00-45	Aviation Weather Services
FAA AC 60-22	Aeronautical Decision Making
FAA AC 61-84	Role of Preflight Preparation
FAA AC 90-48	Pilot's Role in Collision Avoidance
FAA AC 120-51	Crew Resource Management Training
AIP	Aeronautical Information Publication – Eastern Caribbean
AFD	Airport Facility Directory
AFM	BCAD Approved Aeroplane Flight Manual
POH	Pertinent Pilot's Operation Handbooks
NOTAMS	Notices to Airmen
Other	Soaring Flight Manual (Jeppeson Sanderson)

(7) The Objective lists the important elements that must be satisfactorily performed to demonstrate competency in a TASK. The Objective includes:

- (a) Specifically what the applicant should be able to do;
- (b) The conditions under which the TASK is to be performed; and
- (c) The acceptable standards of performance.

(8) The following abbreviations have the meanings shown:

ADM	Aeronautical Decision Making
AIRMETS	Airman's Meteorological Information
APV	Approach with Vertical Guidance
AFD	Airport Facility Directory
ATC	Air Traffic Control
AIP	Aeronautical Information Publication of the Eastern Caribbean
ATS	Air Traffic Service
BCARS	Barbados Civil Aviation Regulations
CFIT	Controlled Flight Into Terrain

CRM	Crew Resource Management
FAA AC	Federal Aviation Administration Advisory Circular
FSTD	Flight Simulation Training Device
NOTAM	Notice to Airmen
NPA	Nonprecision Approach
PIREP(s)	Pilot Weather Reports
SIGMETS	Significant Meteorological Advisory
SRM	Single Pilot Resource Management
STS	Skill Test Standards
SUA	Single Use Airspace
TFR	Temporary Flight Restriction

USE OF SKILL TEST STANDARDS

5. (1) The BCAD requires that all flight instructor skill tests be conducted in accordance with the appropriate private flight instructor STS and the policies set forth herein. Applicants shall be evaluated in all tasks included in the areas of operation of the appropriate STS (unless otherwise noted).

(2) An applicant who holds flight instructor licence seeking an additional aircraft category rating and/or class rating at the flight instructor level, shall be evaluated in the areas of operation and tasks listed in the *Additional Rating Task Table*. At the discretion of the flight test examiner, an evaluation of the applicant's competence in the remaining areas of operation and tasks may be conducted.

(3) In preparation for each skill test, the flight test examiner shall develop a written "plan of action." The "plan of action" shall include all tasks in each area of operation, unless noted otherwise. If the elements in one task have already been evaluated in another task, they need not be repeated. For example, the "plan of action" need not include evaluating the applicant on complying with markings, signals, and clearances at the end of the flight, if that element was sufficiently observed at the beginning of the flight. **Any task selected for evaluation during a skill test shall be evaluated in its entirety.**

(4) The flight test examiner is not required to follow the precise order in which the areas of operation and tasks appear in this document. The flight test examiner may change the sequence or combine tasks with similar Objectives to have an orderly and efficient flow of the skill test..

(5) The flight test examiner is expected to use good judgment in the performance of simulated emergency procedures. The use of the safest means for simulation is expected. Consideration must be given to local conditions, both meteorological and topographical, at the time of the test, as well as the applicant's workload, and the condition of the aircraft used. If the procedure being evaluated would jeopardize safety, it is expected that the applicant will simulate that portion of the manoeuvre.

(6) The flight instructor applicant shall be prepared in **all** knowledge and skill areas and demonstrate the ability to instruct effectively in **all** TASKS included in the AREAS OF OPERATION of the appropriate skill test standard. Throughout the flight portion of the skill test, the examiner shall evaluate the applicant's ability to demonstrate and simultaneously explain the selected procedures and manoeuvres, and to give flight instruction to students at various stages of flight training and levels of experience.

(7) The term “instructional knowledge” means the “what,” “why,” and “how” of a subject matter topic, procedure, or manoeuvre. It also means that the flight instructor applicant's discussions, explanations, and descriptions should follow the recommended teaching procedures and techniques explained in FAA-H-8083-9, Aviation Instructor's Handbook.

(8) The purpose for including common errors in certain TASKS is to assist the examiner in determining that the flight instructor applicant has the ability to recognize, analyze, and correct such errors. The examiner shall not simulate any condition that may jeopardize safe flight or result in possible damage to the aircraft. The common errors listed in the TASK Objectives may or may not be found in the TASK References; however, the BCAD considers their frequency of occurrence justification for their inclusion in the TASK Objectives.

(9) The examiner shall place special emphasis on the applicant's demonstrated ability to teach precise aircraft control and sound judgment in aeronautical decision-making. Evaluation of the applicant's ability to teach judgment shall be accomplished by asking the applicant to describe the oral discussions and the presentation of practical problems that would be used in instructing students in the exercise of sound judgment. The examiner shall also emphasize the evaluation of the applicant's demonstrated ability to teach spatial disorientation, wake turbulence and low-level wind shear avoidance, checklist usage, positive exchange of flight controls, and any other directed special emphasis areas.

SPECIAL EMPHASIS AREAS

6. (1) Examiners and authorized instructors must place special emphasis upon areas of aircraft operation considered critical to flight safety. Among these are:

- (a) positive aircraft control;
- (b) procedures for positive exchange of flight controls;
- (c) stall and spin awareness (if appropriate);
- (d) collision avoidance;
- (e) wake turbulence and low level wind shear avoidance;
- (f) runway incursion avoidance;
- (g) controlled flight into terrain (CFIT);
- (h) aeronautical decision making/risk management;
- (i) checklist usage;
- (j) spatial disorientation;
- (k) temporary flight restrictions (TFR);
- (l) special use airspace (SUA);
- (m) aviation security;
- (n) wire strike avoidance; and
- (o) other areas deemed appropriate to any phase of the skill test or proficiency check.

(2) Although these areas may not be specifically addressed under each TASK, they are essential to flight safety and will be evaluated during the skill test or proficiency check. In all instances, the applicant's actions will be evaluated in accordance to the standards of the TASKS and the ability to use good judgment with reference to the special emphasis areas listed above.

SKILL TEST PREREQUISITES: INSTRUMENT RATING

7. (1) An applicant for flight instructor - glider skill test is required by BCARs General Application and Personnel Licensing Regulation to:

- (a) Age: Be less than 18 years of age.
- (b) Medical fitness: hold Class 1 medical certificate issued as appropriate to the level of licence held;
- (c) Language: Be able to read, speak, write, and understand the English language; and
- (d) Licence: Hold at least a commercial pilot licence with an aircraft rating appropriate to the flight instructor rating sought;
- (e) Knowledge: Have passed the appropriate flight instructor knowledge test(s) since the beginning of the 24th month before the month in which he or she takes the skill test;
- (f) Fundamentals of Instruction: Have an endorsement from an authorized instructor on the fundamentals of instructing appropriate to the required knowledge test;
- (g) Training: Obtain the applicable training and aeronautical experience prescribed for the instrument rating sought;
- (h) Instructor Authorization: Obtain a written statement from an authorized flight instructor certifying that the applicant has been given flight training in preparation for the skill test within 60 days preceding the date of application. The statement shall also state that the instructor finds the applicant competent to pass the skill test and that the applicant has satisfactory knowledge of the subject area(s) in which a deficiency was indicated by the Airman Knowledge Test Report.

AIRCRAFT AND EQUIPMENT REQUIRED FOR THE SKILL TEST

8. The flight instructor - glider applicant is required to provide an airworthy, certificated aircraft for use during the skill test. Its operating limitations must not prohibit the TASKS required on the skill test. Flight instruments are those required for controlling the aircraft without outside references. It must have fully functioning dual controls, except as specified by the Authority.

FLIGHT INSTRUCTOR RESPONSIBILITY

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

(2) Because of the impact of their teaching activities in developing safe, proficient pilots, flight instructors should exhibit a high level of knowledge, skill, and the ability to impart that knowledge and skill to students. Additionally, the flight instructor must certify that the applicant is:

- (a) able to make a practical application of the fundamentals of instructing;
- (b) competent to teach the subject matter, procedures, and manoeuvres included in the standards to students with varying backgrounds and levels of experience and ability;
- (c) able to perform the procedures and manoeuvres included in the standards to at least the COMMERCIAL PILOT skill level¹ while giving effective flight instruction; and
- (d) competent to pass the required skill test for the issuance of the flight instructor certificate with the associated category and class ratings or the addition of a category and/or class rating to a flight instructor certificate.

(3) Throughout the applicant's training, the flight instructor is responsible for emphasizing the performance of and the ability to teach effective visual scanning, collision avoidance, and runway incursion avoidance procedures. These areas are covered, in part, in AP 90-48, Pilot's Role in Collision Avoidance; FAA-H8083-3, Aeroplane Flying Handbook; FAA-H-8083-25, Pilot's Handbook of Aeronautical Knowledge; and the Aeronautical Information Manual.

EXAMINER RESPONSIBILITY

10. (1) The examiner² conducting the skill test is responsible for determining that the applicant meets the acceptable standards of teaching ability, knowledge, and skill in the selected TASKS. The examiner makes this determination by accomplishing an Objective that is appropriate to each selected TASK, and includes an evaluation of the applicant's:

- (a) ability to apply the fundamentals of instructing;
- (b) knowledge of, and ability to teach, the subject matter, procedures, and manoeuvres covered in the TASKS;
- (c) ability to perform the procedures and manoeuvres included in the standards to at least the COMMERCIAL PILOT skill level while giving effective flight instruction; and
- (d) ability to analyze and correct common errors related to the procedures and manoeuvres covered in the TASKS.

¹ Commercial Pilot skill level is defined as performing a procedure or manoeuvre within the tolerances listed in the FAA commercial pilot practical test standards. If the manoeuvre appears only in the private pilot practical test standards, the term means that the applicant's performance is expected to be more precise than indicated by the stated tolerances.

² The word "examiner" is used throughout the standards to denote either the BCAD inspector or BCAD designated pilot examiner who conducts an official practical test.

(2) It is intended that oral questioning be used at any time during the ground or flight portion of the skill test to determine that the applicant can instruct effectively and has a comprehensive knowledge of the TASKS and their related safety factors.

(3) During the flight portion of the skill test, the examiner shall act as a student during selected manoeuvres. This will give the examiner an opportunity to evaluate the flight instructor applicant's ability to analyze and correct simulated common errors related to these manoeuvres. The examiner will also evaluate the applicant's use of visual scanning and collision avoidance procedures, and the applicant's ability to teach those procedures.

SATISFACTORY PERFORMANCE

11. (1) Satisfactory performance to meet the requirements for licence issue is based on the applicant's ability to safely apply-

- (a) knowledge of the fundamentals of instructing;
- (b) knowledge of the technical subject areas;
- (c) knowledge of the flight instructor's responsibilities concerning the pilot licensing process;
- (d) knowledge of the flight instructor's responsibilities concerning logbook entries and pilot licence endorsements;
- (e) ability to demonstrate the procedures and manoeuvres selected by the examiner to at least the COMMERCIAL PILOT skill level while giving effective instruction; and
- (f) competence in teaching the procedures and manoeuvres selected by the examiner.

UNSATISFACTORY PERFORMANCE

12. (1) 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 skill test is failed.

(2) 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 licence or rating sought. The test may be continued ONLY with the consent of the applicant. If the test is discontinued, the applicant is entitled to credit for only those AREAS OF OPERATION and TASKS satisfactorily performed; however, during the retest, and at the discretion of the examiner, any TASK may be re-evaluated, including those previously passed. Specific reasons for disqualification are:

- (a) failure to perform a procedure or manoeuvre to the COMMERCIAL PILOT skill level while giving effective flight instruction;
- (b) failure to provide an effective instructional explanation while demonstrating a procedure or manoeuvre (explanation during the demonstration must be clear, concise, technically accurate, and complete with no prompting from the examiner);
- (c) any action or lack of action by the applicant which requires corrective intervention by the examiner to maintain safe flight; and

- (d) failure to use proper and effective visual scanning techniques to clear the area before and while performing manoeuvres.

(3) When a notice of disapproval is issued, the flight test examiner shall record the applicant's unsatisfactory performance in terms of the area of operation and specific task(s) not meeting the standard appropriate to the skill test conducted. The area(s) of operation/tasks not tested and the number of skill test failures shall also be recorded. If the applicant fails the skill test because of a special emphasis area, the Notice of Disapproval shall indicate the associated task.

AERONAUTICAL DECISION MAKING AND RISK MANAGEMENT

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

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

CREW RESOURCE MANAGEMENT (CRM)

14. (1) CRM refers to the effective use of all available resources: human resources, hardware, and information. Human resources include all groups routinely working with the cockpit crew or pilot who are involved with decisions that are required to operate a flight safely. These groups include, but are not limited to flight operations officers/dispatchers, cabin crewmembers, maintenance personnel, air traffic controllers, and weather services. CRM is not a single task, but a set of competencies that must be evident in all tasks in this STS as applied to either single pilot operations or crew. CRM competencies, grouped into three clusters of observable behaviour, are:

(a) COMMUNICATIONS PROCESSES AND DECISIONS

1. Briefing
2. Inquiry/Advocacy/Assertiveness
3. Self-Critique
4. Communication with Available Personnel Resources
5. Decision Making

(b) BUILDING AND MAINTENANCE OF A FLIGHT TEAM

1. Leadership/Followership
2. Interpersonal Relationships

(c) **WORKLOAD MANAGEMENT AND SITUATIONAL AWARENESS**

1. Preparation/Planning
2. Vigilance
3. Workload Distribution
4. Distraction Avoidance
5. Wake Turbulence Avoidance

(2) CRM deficiencies almost always contribute to the unsatisfactory performance of a TASK. Therefore, the competencies provide an extremely valuable vocabulary for debriefing. For debriefing purposes, an amplified list of these competencies, expressed as behavioural markers, may be found in FAA AC 120-51, Crew Resource Management Training, as amended. These markers consider the use of various levels of automation in flight management systems.

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

HOW THE EXAMINER APPLIES CREW RESOURCE MANAGEMENT

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

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

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

SINGLE-PILOT RESOURCE MANAGEMENT

16. Single-Pilot Resource Management refers to the effective use of ALL available resources: human resources, hardware, and information. It is similar to Crew Resource Management (CRM) procedures that are being emphasized in multi-crewmember operations except that only one crewmember (the pilot) is involved. Human resources "...include all other groups routinely working with the pilot who are involved in decisions that are required to operate a flight safely. These groups include, but are not limited to: dispatchers, weather briefers, maintenance personnel, and air traffic controllers." Pilot Resource Management is not a single TASK; it is a set of skill competencies that must be evident in all TASKS in this skill test standard as applied to single-pilot operation.

APPLICANT'S USE OF CHECKLISTS

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

USE OF DISTRACTIONS DURING SKILL TESTS

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

POSITIVE EXCHANGE OF FLIGHT CONTROLS

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

(2) When the instructor wishes the student to take control of the aircraft, he or she will say, "You have the flight controls." The student acknowledges immediately by saying, "I have the flight controls." The flight instructor again says, "You have the flight controls." When control is returned to the instructor, follow the same procedure. A visual check is recommended to verify that the exchange has occurred. There should never be any doubt as to who is flying the aircraft.

METRIC CONVERSION INITIATIVE

20. To assist pilots in understanding and using the metric measurement system, the STSs 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 skill purposes, is rounded to the nearest 10 meter increment or even altitude as necessary.

ADDITIONAL RATING TASK TABLES

21. (1) The following table indicates the areas of operations required during a skill test for the addition of a glider rating to an existing flight instructor licence with another aircraft category rating.

ADDITION OF A GLIDER RATING TO AN EXISTING FLIGHT INSTRUCTOR LICENCE							
AREAS OF OPERATION	Required TASKS are indicated by either YES, meaning that the TASK must be tested for the addition of a glider rating, or NO, meaning that the TASK does not have to be tested for the addition of a glider category rating.						
	ASEL	ASES	AMEL	AMES	RH	RG	IAH
I	NO	NO	NO	NO	NO	NO	NO
II	YES	YES	YES	YES	YES	YES	YES
III	YES	YES	YES	YES	YES	YES	YES
IV	NO	NO	NO	NO	NO	NO	NO
V	YES	YES	YES	YES	YES	YES	YES
VI	YES	YES	YES	YES	YES	YES	YES
VII	YES	YES	YES	YES	YES	YES	YES
VIII	YES	YES	YES	YES	YES	YES	YES
IX	YES	YES	YES	YES	YES	YES	YES
X	YES	YES	YES	YES	YES	YES	YES
XI	YES	YES	YES	YES	YES	YES	YES
XII	YES**	YES**	YES	YES	YES	YES	YES
XIII	YES	YES	YES	YES	YES	YES	YES
XIV	YES	YES	YES	YES	YES	YES	YES

*The EXAMINER shall select the kind of launch based on the applicant's qualifications..

** TASK C not required.

LEGEND

<u>ASEL</u>	<u>Aeroplane Single-Engine Land</u>
<u>ASES</u>	<u>Aeroplane Single-Engine Sea</u>
<u>AMEL</u>	<u>Aeroplane Multiengine Land</u>
<u>AMES</u>	<u>Aeroplane Multiengine Sea</u>
<u>RH</u>	<u>Rotorcraft Helicopter</u>
<u>RG</u>	<u>Rotorcraft Gyroplane</u>
<u>IAH</u>	<u>Instrument – Aeroplane or Helicopter</u>

(2) The applicant who has satisfactorily accomplished ground and flight training and received an endorsement from an authorized instructor on ground tow, aero tow, and/or self-launch procedures will be evaluated in only one kind of launch procedure. The applicant's instructing privileges will include each kind of launch for which previously endorsed.

SECTION TWO

APPLICANT'S SKILL TEST CHECKLIST: FLIGHT INSTRUCTOR GLIDER

APPOINTMENT WITH THE FLIGHT TEST EXAMINER:

FLIGHT TEST EXAMINER'S NAME: _____

LOCATION: _____

DATE/TIME: _____

I. ACCEPTABLE AIRCRAFT

- Aircraft Documents:
 - Airworthiness Licence
 - Registration Licence
 - Operating Limitations
- Aircraft Maintenance Records:
 - Logbook Record of Airworthiness Inspections and AD Compliance
 - Applicable Airworthiness Directives
- Pilot's Operating Handbook,
- BCAD Approved Glider Flight Manual

II. PERSONAL EQUIPMENT

- Skill Test Standards
- Current Aeronautical Charts
- Computer and Plotter
- Flight Plan Form
- Flight Logs
- Current and Appropriate Flight Information Publications

III. PERSONAL RECORDS

- Identification-Photo/Signature ID
- Pilot Licence Currently Held
- Current and Appropriate Medical Certificate
- Completed BCAD Form PL001, Application For Flight Crew Licence, Rating, Authorization or Validation Certificate with authorized instructor's Signature (If applicable)
- Original Aviation Knowledge Test Report
- Pilot Logbook or Approved Training Organization (ATO) document containing an authorized instructor's endorsement certifying the applicant is prepared for the required skill test.
- BCAD Form PL005, Notice of Denial (if applicable)
- Examiner's Fee (if applicable)

**EXAMINER'S SKILL TEST CHECKLIST
FLIGHT INSTRUCTOR—GLIDER**

APPLICANT'S NAME _____

LOCATION _____

DATE/TIME _____

I. FUNDAMENTALS OF INSTRUCTING

- A. The Learning Process
- B. Human Behaviour
- C. The Teaching Process
- D. Teaching Methods
- E. Critique and Evaluation
- F. Flight Instructor Characteristics and Responsibilities
- G. Planning Instructional Activity

II. TECHNICAL SUBJECT AREAS

- A. Aeromedical Factors
- B. Visual Scanning and Collision Avoidance
- C. Use of Distractions During Flight Training
- D. Principles of Flight
- E. Elevators, Ailerons, and Rudder
- F. Trim, Lift, and Drag Devices
- G. Glider Weight and Balance
- H. Navigation and Flight Planning
- I. Regulations and Publications
- J. National Airspace System
- K. Logbook Entries and Certificate Endorsements

III. PREFLIGHT PREPARATION

- A. Certificates and Documents
- B. Weather Information
- C. Operation of Systems
- D. Performance and Limitations

**IV. PREFLIGHT LESSON ON A MANEUVER TO BE PERFORMED
IN FLIGHT**

Manoeuvre Lesson

V. PREFLIGHT PROCEDURES

- A. Assembly
- B. Ground Handling

- C. Preflight Inspection
- D. Cockpit Management
- E. Visual Signals

VI. AIRPORT AND GLIDERPORT OPERATIONS

- A. Radio Communications
- B. Traffic Patterns
- C. Airport, Runway, and Taxiway Signs, Markings, and Lighting

VII. LAUNCHES AND LANDINGS

AERO TOW

- A. Before Takeoff Check
- B. Normal and Crosswind Takeoff
- C. Maintaining Tow Positions
- D. Slack Line
- E. Boxing The Wake
- F. Tow Release
- G. Abnormal Occurrences

GROUND TOW (AUTO OR WINCH)

- H. Before Takeoff Check
- I. Normal and Crosswind Takeoff
- J. Abnormal Occurrences

SELF-LAUNCH

- K. Engine Starting
- L. Taxiing
- M. Before Takeoff Check
- N. Normal and Crosswind Takeoff and Climb
- O. Engine Shutdown In Flight
- P. Engine Restart in Flight
- Q. Abnormal Occurrences

LANDINGS

- R. Normal and Crosswind Landing
- S. Slips to Landing
- T. Downwind Landing

VIII. FUNDAMENTALS OF FLIGHT

- A. Straight Glides
- B. Turns to Headings

IX. PERFORMANCE AIRSPEEDS

- A. Minimum Sink Airspeed
- B. Speed-To-Fly

X. SOARING TECHNIQUES

- A. Thermal Soaring
- B. Ridge and Slope Soaring
- C. Wave Soaring

XI. PERFORMANCE MANEUVERS

- A. Straight Glides
- B. Turns to Headings
- C. Steep Turns

XII. SLOW FLIGHT, STALLS, AND SPINS

- A. Manoeuvring at Minimum Control Airspeed
- B. Stall Recognition and Recovery
- C. Spins

XIII. EMERGENCY OPERATIONS

- A. Simulated Off-Airport Landing
- B. Emergency Equipment and Survival Gear

XIV. POSTFLIGHT PROCEDURES

After-Landing and Securing

AREAS OF OPERATION

I. AREA OF OPERATION: FUNDAMENTALS OF INSTRUCTING

NOTE: The examiner will select at least TASKs E and F.

A. TASK: THE LEARNING PROCESS

REFERENCE: FAA-H-8083-9.

Objective. To determine that the applicant exhibits instructional knowledge of the elements of the learning process by describing:

1. The definition and characteristics of learning.
2. Practical application of the laws of learning.
3. Factors involved in how people learn.
4. Recognition and proper use of the various levels of learning.
5. Principles that are applied in learning a skill.
6. Factors of forgetting and retention.
7. How the transfer of learning affects the learning process.
8. How the formation of habit patterns affects the learning process.

B. TASK: HUMAN BEHAVIOR

REFERENCE: FAA-H-8083-9.

Objective. To determine that the applicant exhibits instructional knowledge of the elements of human behaviour by describing:

1. Control of human behaviour.
2. Development of student potential.
3. Relationship of human needs to behaviour and learning.
4. Relationship of defence mechanisms to student learning and pilot decision-making.
5. General rules that a flight instructor should follow during student training to ensure good human relations.

C. TASK: THE TEACHING PROCESS

REFERENCE: FAA-H-8083-9.

Objective. To determine that the applicant exhibits instructional knowledge of the elements of the teaching process by describing:

1. Preparation of a lesson for a ground or flight instructional period.
2. Presentation of knowledge and skills, including the methods, which are suitable in particular situations.
3. Application, by the student, of the knowledge and skills presented by the instructor.
4. Review of the material presented and the evaluation of student performance and accomplishment.

D. TASK: TEACHING METHODS

REFERENCE: FAA-H-8083-9.

Objective. To determine that the applicant exhibits instructional knowledge of the elements of teaching methods by describing:

1. The organization of a lesson, i.e., introduction, development, and conclusion.
2. The lecture method.
3. The guided discussion method.
4. The demonstration-performance method.
5. Computer and/or video assisted instruction.

E. TASK: CRITIQUE AND EVALUATION

REFERENCE: FAA-H-8083-9.

Objective. To determine that the applicant exhibits instructional knowledge of the elements of critique and evaluation by describing:

1. Purpose and characteristics of an effective critique.
2. Difference between critique and evaluation.
3. Characteristics of effective oral questions and what type to avoid.
4. Responses to student questions.
5. Characteristics and development of effective written tests.
6. Characteristics and uses of performance tests, specifically, the BCAD skill test standards.

F. TASK: FLIGHT INSTRUCTOR CHARACTERISTICS AND RESPONSIBILITIES

REFERENCE: FAA-H-8083-9.

Objective. To determine that the applicant exhibits instructional knowledge of the elements of flight instructor characteristics and responsibilities by describing:

1. Characteristics and qualifications of a professional flight instructor.
2. Role of the flight instructor in dealing with student stress, anxiety, and psychological abnormalities.
3. Flight instructor's responsibility with regard to student pilot supervision and surveillance.
4. Flight instructor's authority and responsibility for endorsements and recommendations.
5. Flight instructor's responsibility in the conduct of the required BCAD flight review.

G. TASK: PLANNING INSTRUCTIONAL ACTIVITY

REFERENCE: FAA-H-8083-9.

Objective. To determine that the applicant exhibits instructional knowledge of the elements of planning instructional activity by describing:

1. Development of a course of training.
2. Content and use of a training syllabus.
3. Purpose, characteristics, proper use, and items of a lesson plan.
4. Flexibility features of a course of training, syllabus, and lesson plan required to accommodate students with varying backgrounds, levels of experience, and ability.

II. AREA OF OPERATION: TECHNICAL SUBJECT AREAS

NOTE: The examiner will select TASK K and at least one other TASK.

A. TASK: AEROMEDICAL FACTORS

REFERENCES: FAA-H-8083-13; AIM; Soaring Flight Manual.

Objective. To determine that the applicant exhibits instructional knowledge of the elements related to aeromedical factors by describing:

1. Hypoxia, its symptoms, effects, and corrective action.
2. Hyperventilation, its symptoms, effects, and corrective action.
3. Middle ear and sinus problems, their causes, effects, and corrective action.
4. Spatial disorientation, its causes, effects, and corrective action.
5. Motion sickness, its causes, effects, and corrective action.
6. Effects of alcohol and drugs, and their relationship to safety.
7. Effects of dehydration and their relationship to flight safety.
8. Carbon monoxide poisoning, its symptoms, effects and corrective action (self-launch).
9. How evolved gas from scuba diving can affect a pilot during flight.
10. Fatigue, its effects and corrective action.

B. TASK: VISUAL SCANNING AND COLLISION AVOIDANCE

REFERENCES: FAA-H-8083-25; AC 90-48; AIM.

Objective. To determine that the applicant exhibits instructional knowledge of the elements of visual scanning and collision avoidance by describing:

1. Relationship between a pilot's physical or mental condition and vision.
2. Environmental conditions and optical illusions that affect vision.
3. "See and avoid" concept.
4. Practice of "time sharing" of attention inside and outside the cockpit.
5. Proper visual scanning technique.
6. Relationship between poor visual scanning habits, aircraft speed differential and increased collision risk.
7. Appropriate clearing procedures.
8. Situations, which involve the greatest collision, risk.

C. TASK: USE OF DISTRACTIONS DURING FLIGHT TRAINING

REFERENCE: AC 61-67.

Objective. To determine that the applicant exhibits instructional knowledge of the elements related to use of distractions during flight training by describing:

1. Flight situations where pilot distraction can be a causal factor related to aircraft accidents.
2. Selection of realistic distractions for specific flight situations.
3. Relationship between division of attention and flight instructor's use of distractions.
4. Difference between proper use of distractions and harassment.

D. TASK: PRINCIPLES OF FLIGHT

REFERENCES: FAA-H-8083-13; Soaring Flight Manual.

Objective. To determine that the applicant exhibits instructional knowledge of the elements related to principles of flight by describing:

1. Glider and airfoil design characteristics.
2. The three axes of rotation and stability about those axes.
3. Lift/drag relationship.
4. Forces acting on a glider in straight flight and turns.
5. Stalls and spins.

E. TASK: ELEVATORS, AILERONS, AND RUDDER

REFERENCES: FAA-H-8083-13; Soaring Flight Manual.

Objective. To determine that the applicant exhibits instructional knowledge of the elements related to elevators, ailerons, and rudder by describing:

1. Purpose of each primary control.
2. Location, attachments, and system of control.
3. Direction of movement relative to airflow.
4. Effect on glider control.
5. Proper technique for use.
6. Adverse yaw.

F. TASK: TRIM, LIFT, AND DRAG DEVICES

REFERENCES: FAA-H-8083-13; Soaring Flight Manual; Glider Flight Manual.

Objective. To determine that the applicant exhibits instructional knowledge of the elements related to trim, lift, and drag devices by describing:

1. Purpose.
2. Location, attachments, and system of control.
3. Direction of trim movement relative to airflow and the primary control surface.
4. Effect on glider control.
5. Proper technique for use.

G. TASK: GLIDER WEIGHT AND BALANCE

REFERENCES: FAA-H-8083-1, FAA-H-8083-13; Glider Flight Manual.

Objective. To determine that the applicant exhibits instructional knowledge of the elements of glider weight and balance by describing:

1. Weight and balance terms.
2. Effect of weight and balance on performance.
3. Determination of total weight, centre of gravity, and changes that occur when adding, removing, or shifting weight.
4. Purpose and effect of removable ballast on performance.

H. TASK: NAVIGATION AND FLIGHT PLANNING

REFERENCES: FAA-H-8083-13; AIM; Soaring Flight Manual.

Objective. To determine that the applicant exhibits instructional knowledge of the elements related to navigation and flight planning by describing:

1. Terms used in navigation.
2. Importance of using proper and current aeronautical charts.
3. Features of aeronautical charts to include identification of various types of airspace and symbols.
4. Method of plotting a course and selecting prominent en route checkpoints.
5. Fundamentals of pilotage and dead reckoning.
6. Importance of a weather check and the use of good judgment in making a “go/no-go” decision.
7. Construction of a flight profile to determine minimum flight altitude required at “go-ahead points.”
8. Factors that should be considered in the selection of a suitable landing area in the event an off-airport landing must be accomplished.

I. TASK: REGULATIONS AND PUBLICATIONS

REFERENCES: 14 CFR parts 1, 61, 91; NTSB Part 830; AC 00-2, AC 61-94; AIM; Glider Flight Manual.

Objective. To determine that the applicant exhibits instructional knowledge of the elements related to regulations and publications, their purpose, general content, availability, and method of revision by describing:

1. 14 CFR parts 1, 61, and 91.
2. NTSB Part 830.
3. Flight Information Publications.
4. Skill Test Standards.
5. Glider Flight Manual, if applicable.

J. TASK: NATIONAL AIRSPACE SYSTEM

REFERENCES: 14 CFR part 91; AIM.

Objective. To determine that the applicant exhibits instructional knowledge of the elements related to the national airspace system by describing:

1. General dimensions and operating requirements of airspace classes.
2. Operating limitations associated with controlled, uncontrolled, special use, and other airspace, temporary flight restrictions (TFRs).

K. TASK: LOGBOOK ENTRIES AND CERTIFICATE ENDORSEMENTS

REFERENCES: 14 CFR part 61; AC 61-65, AC 61-98.

Objective. To determine that the applicant exhibits instructional knowledge of the elements related to logbook entries and certificate endorsements by describing:

1. Required logbook entries for instruction given, including type of launches.
2. Required student pilot certificate endorsements, including appropriate logbook entries.
3. Preparation of a recommendation for a pilot skill test, including the appropriate logbook entry.
4. Required endorsement of a pilot logbook for the satisfactory completion of a BCAD flight review.
5. Required flight instructor records.

III. AREA OF OPERATION: PREFLIGHT PREPARATION

NOTE: The examiner will select at least one TASK.

A. TASK: CERTIFICATES AND DOCUMENTS

REFERENCES: 14 CFR parts 43, 61, 91; FAA-H-8083-13; Glider Flight Manual.

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

1. Requirements for issuance of pilot and flight instructor certificates and ratings, and the privileges and limitations of those certificates and ratings.
2. Medical fitness.
3. Airworthiness and registration certificates.
4. Glider flight manuals.
5. Glider maintenance/inspection requirements and associated records.

B. TASK: WEATHER INFORMATION

REFERENCES: AC 00-6, AC 00-45, and AC 61-84; FAA-H-8083-13; Soaring Flight Manual.

Objective. To determine that the applicant exhibits instructional knowledge of the elements related to weather information by describing:

1. Importance of a thorough weather check.
2. Various sources for obtaining weather information.
3. Use of weather reports, forecasts, and charts, including stability charts.
4. Use of PIREPs, SIGMETs, and AIRMETs.
5. Recognition of aviation weather hazards and their effects on glider operations.
6. Factors to be considered in making a “go/no-go” decision.
7. The relationship of the following factors to the lifting process—
 - a. pressure and temperature lapse rates.
 - b. atmospheric instability.
 - c. thermal index and thermal production.
 - d. cloud formation and identification.
 - e. frontal weather.
 - f. land, sea, and valley breezes.
 - g. orographic lift.
 - h. mountain waves.

C. TASK: OPERATION OF SYSTEMS

REFERENCES: FAA-H-8083-13; Soaring Flight Manual; Glider Flight Manual.

Objective. To determine that the applicant exhibits instructional knowledge of the elements related to the operation of systems of the glider used for the skill test, by describing:

1. Magnetic compass.
2. Yaw string or inclinometer.
3. Airspeed indicator and altimeter.
4. Variometer and total energy compensator.
5. Gyroscopic instruments.
6. Electrical.
7. Landing gear and brakes.
8. Avionics.
9. Oxygen equipment.

D. TASK: PERFORMANCE AND LIMITATIONS

REFERENCES: FAA-H-8083-13; Soaring Flight Manual; Glider Flight Manual.

Objective. To determine that the applicant exhibits instructional knowledge of the elements related to performance and limitations by describing:

1. Determination of weight and balance condition.
2. Use of performance charts and other data for determining performance in various phases of flight.
3. Effects of density altitude, wind, and other atmospheric conditions on performance.
4. Applicable performance speeds, and their uses.
5. Relationship between airspeeds and load factors.
6. Purpose and effect of water ballast on performance.
7. Factors to be considered in determining that the required performance is within the glider's capabilities and limitations.

IV. AREA OF OPERATION: PREFLIGHT LESSON ON A MANEUVER TO BE PERFORMED IN FLIGHT

NOTE: The examiner shall select at least one manoeuvre from AREAS OF OPERATION VII through XII, and ask the applicant to present a preflight lesson on the selected manoeuvre as the lesson would be taught to a student. Previously developed lesson plans from the applicant's library may be used.

TASK: MANEUVER LESSON

REFERENCES: FAA-H-8083-9; Soaring Flight Manual; Glider Flight Manual.

Objective. To determine that the applicant exhibits instructional knowledge of the selected manoeuvre by:

1. Using a lesson plan that includes all essential items to make an effective and organized presentation.
2. Stating the objective.
 3. Giving an accurate, comprehensive oral description of the manoeuvre, including the elements and associated common errors.
4. Using instructional aids, as appropriate.
5. Describing the recognition, analysis, and correction of common errors.

V. AREA OF OPERATION: PREFLIGHT PROCEDURES

NOTE: The examiner will select at least one TASK.

A. TASK: ASSEMBLY

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Soaring Flight Manual; Glider Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to assembly by describing—
 - a. selection of a suitable assembly area and sufficient crewmembers for assembly.
 - b. importance of following a checklist.
 - c. proper handling of components.
 - d. cleaning and lubricating parts, as appropriate.
 - e. post-assembly inspection, to include accounting for parts, tools, and making a positive control check.
2. Exhibits instructional knowledge of common errors related to assembly by describing—
 - a. poor planning with regard to selection of a suitable assembly area or the availability of sufficient number of crewmembers for assembly.
 - b. failure to use a checklist.
 - c. careless handling of components.
 - d. failure to clean and lubricate parts, as appropriate.
 - e. omission, or careless performance, of a post-assembly inspection, including a positive control check.
3. Demonstrates and simultaneously explains assembly from an instructional standpoint.

B. TASK: GROUND HANDLING

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Soaring Flight Manual; Glider Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to ground handling by describing—
 - a. selection and use of proper ground handling equipment for existing conditions.
 - b. proper positioning and use of a sufficient number of crewmembers.
 - c. proper positioning and securing of controls.
 - d. precautions to be taken with regard to the canopy(ies).
 - e. importance of ensuring that placards or cautions are observed when handling glider structure.
 - f. importance of following a suitable route, using an appropriate speed, and being aware of obstructions.
2. Exhibits instructional knowledge of common errors related to ground handling by describing—
 - a. failure to select and use proper ground handling equipment.
 - b. hazards of attempting to move the glider with an insufficient number of crewmembers.
 - c. failure to properly position or secure controls.
 - d. failure to secure canopy(ies).
 - e. failure to follow directions stated on placards.
 - f. poor choice of route, use of inappropriate speed, and lack of obstruction awareness.
3. Demonstrates and simultaneously explains ground handling from an instructional standpoint.
4. Analyzes and corrects common errors related to ground handling.

C. TASK: PREFLIGHT INSPECTION

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Soaring Flight Manual; Glider Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to a preflight inspection, as appropriate, to the glider used for the skill test, by describing—
 - a. reasons for the preflight inspection, items that should be inspected, and how defects are detected.
 - b. importance of using an appropriate checklist.
 - c. inspection of oxygen system, if applicable.
 - d. detection of visible structural damage.
 - e. determination that glider components are properly assembled and attachments secure, including flight controls.
 - f. ballast management, including c.g. weights and water ballast.
 - g. inspection of towline, tow hitch, weak link, and release mechanism.
 - h. use of sound judgment in determining whether glider is in condition for safe flight.
2. Exhibits instructional knowledge of common errors related to a preflight inspection by describing—
 - a. failure to use, or improper use of, the checklist.
 - b. hazards that may result from allowing distractions to interrupt a preflight inspection.
 - c. inability to recognize discrepancies.
3. Demonstrates and simultaneously explains a preflight inspection from an instructional standpoint.
4. Analyzes and corrects common errors related to a preflight inspection.

D. TASK: COCKPIT MANAGEMENT

REFERENCES: 14 CFR part 91; FAA-S-8081-22, FAA-S-8081-23; Glider Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements of cockpit management by describing—
 - a. proper arranging and securing of essential materials and equipment in the cockpit.
 - b. proper use and/or adjustment of cockpit items, such as safety belts, shoulder harnesses, rudder pedals, seats, and parachutes.
 - c. occupant briefing on emergency procedures, and use of safety belts and shoulder harnesses.

2. Exhibits instructional knowledge of common errors related to cockpit management by describing—
 - a. failure to place and secure essential materials and equipment for easy access during flight.
 - b. improper adjustment of equipment and controls.
 - c. failure to brief occupants on emergency procedures, and use of safety belts and shoulder harnesses.

3. Demonstrates and simultaneously explains cockpit management from an instructional standpoint.

E. TASK: VISUAL SIGNALS

NOTE: The applicant's competence with regard to emergency signals may be evaluated through oral testing.

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Soaring Flight Manual; Glider Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to visual signals by describing the—
 - a. pre-launch signals, including purpose of and proper response to each.
 - b. launch signals, including purpose of and proper response to each.
 - c. airborne signals, including purpose of and proper response to each.
 - d. emergency signals, including purpose of and proper response to each.
2. Exhibits instructional knowledge of common errors related to visual signals by describing the—
 - a. improper transmission of pre-launch and launch signals to crewmembers.
 - b. improper response to launch signals.
 - c. improper transmission of airborne signals to tow pilot.
 - d. improper response to airborne signals from tow pilot.
 - e. improper transmission of, or response to, airborne emergency signals.
3. Demonstrates and simultaneously explains visual signals from an instructional standpoint.
4. Analyzes and corrects common errors related to visual signals.

VI. AREA OF OPERATION: AIRPORT AND GLIDERPORT OPERATIONS

NOTE: The examiner shall select at least one TASK.

A. TASK: RADIO COMMUNICATIONS

REFERENCES: FAA-H-8083-25; AIM; FAA-S-8081-22, FAA-S-8081-23.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements of radio communications by describing—
 - a. selection and use of appropriate radio frequencies.
 - b. recommended procedure and phraseology for radio voice communications, as described in the AIM.
 - c. receipt, acknowledgment of, and compliance with, ATC clearances and other instructions.
 - d. prescribed procedure for radio communications failure.
 - e. interpretation of, and compliance with, ATC light signals.

2. Exhibits instructional knowledge of common errors related to radio communications by describing—
 - a. use of improper frequencies.
 - b. improper techniques and phraseologies when using radio voice communications.
 - c. failure to acknowledge, or properly comply with, ATC clearances and other instructions.
 - d. use of improper procedures for radio communications failure.
 - e. failure to understand, or to properly comply with, ATC light signals.

B. TASK: TRAFFIC PATTERNS

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; AC 90-66; FAA-S-8081-22, FAA-S-8081-23; Soaring Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to traffic patterns by describing—
 - a. segments (or legs) and procedures applicable to flying a normal glider traffic pattern.
 - b. importance of pilot awareness of co-existing traffic patterns/runways, use of proper visual scanning technique, and maintenance of spacing on other aircraft.
 - c. completion of pre-landing checklist.
 - d. appropriate airspeed and proper technique for wind drift correction.
 - e. selection of touchdown and stop points.
 - f. appropriate corrections and compensations for lift and sink areas.
 - g. considerations for wind shear.
 - h. proper planning and use of flaps, spoilers, and/or dive brakes.
2. Exhibits instructional knowledge of common errors related to traffic patterns by describing—
 - a. failure to scan properly and have appropriate spacing.
 - b. poorly planned entry leg.
 - c. improper correction for wind drift.
 - d. rough or uncoordinated control technique.
 - e. poor judgment in the selection of touchdown and stop points.
 - f. failure to maintain appropriate airspeed.
 - g. failure to apply needed corrections at various points in the pattern.
 - h. hazards of a low base leg and a low uncoordinated turn to final.
3. Demonstrates and simultaneously explains traffic patterns from an instructional standpoint.
4. Analyzes and corrects common errors related to traffic patterns.

**C. TASK: AIRPORT, RUNWAY, AND TAXIWAY SIGNS,
MARKINGS, AND LIGHTING**

REFERENCES: FAA-H-8083-9; AIM; FAA-S-8081-22, FAA-S-8081-23.

Objective. To determine that the applicant exhibits instructional knowledge of the elements of airport, runway, and taxiway signs, markings, and lighting by describing:

1. Identification and proper interpretation of airport, runway, and taxiway signs, and markings.
2. Identification and proper interpretation of airport, runway, and taxiway lighting.

VII. AREA OF OPERATION: LAUNCHES AND LANDINGS

NOTE: Examiner will select kind of launch based on the applicant's qualifications.

AERO TOW

NOTE: The examiner will select at least one TASK.

A. TASK: BEFORE TAKEOFF CHECK

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Soaring Flight Manual; Glider Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to the before takeoff check by describing—
 - a. reason for performing each checklist item.
 - b. establishment, with crewmembers, of a proper course of action, including visual signals, speeds, wind, and emergency procedures.
 - c. proper procedure for setting altimeter, checking and adjusting controls, and closing and securing canopy(ies).
 - d. use of the appropriate hitch for the type of launch to be conducted.
 - e. proper procedure for checking towline hookup and release mechanism.
 - f. importance of reviewing takeoff emergency procedures.
 - g. method used for ensuring adequate clearance from other traffic.
2. Exhibits instructional knowledge of common errors related to the before takeoff check by describing—
 - a. omission or improper accomplishment of essential items.
 - b. failure to use proper visual signals.
 - c. failure to check or properly adjust controls.
 - d. failure to follow proper procedure for checking towline hookup and release mechanism.
 - e. hazards of failing to review takeoff emergency procedures.
3. Demonstrates and simultaneously explains the before takeoff check from an instructional standpoint.
4. Analyzes and corrects common errors related to the before takeoff check.

B. TASK: NORMAL AND CROSSWIND TAKEOFF

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-8081-23; Soaring Flight Manual; Glider Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to a normal and crosswind takeoff by describing—
 - a. glider configuration and positioning on the runway.
 - b. initial positioning of controls.
 - c. use of proper pre-launch and launch visual signals.
 - d. directional control during takeoff roll.
 - e. crosswind control technique.
 - f. proper lift-off attitude, maintenance of alignment with the towplane, and climb out technique.

2. Exhibits instructional knowledge of common errors related to a normal and crosswind takeoff by describing—
 - a. improper glider configuration.
 - b. improper initial positioning of flight controls.
 - c. use of improper visual signals.
 - d. failure to maintain alignment behind towplane before towplane becomes airborne.
 - e. improper position relative to towplane during lift-off.
 - f. improper glider position, in crosswind, after towplane becomes airborne.

3. Demonstrates and simultaneously explains a normal or crosswind takeoff from an instructional standpoint.
4. Analyzes and corrects common errors related to a normal or crosswind takeoff.

C. TASK: MAINTAINING TOW POSITIONS

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Soaring Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to maintaining tow positions by describing—
 - a. high tow and low tow, including purpose, recognition, and control technique for each.
 - b. wake turbulence associated with towplane.
 - c. proper technique for transitioning between high-tow and low-tow positions.
 - d. proper technique for performing turns on tow.
 - e. over-control and under-control while on tow.
2. Exhibits instructional knowledge of common errors related to maintaining tow positions by describing—
 - a. faulty technique with regard to proper vertical and lateral positions during high tow and low tow.
 - b. faulty technique during transition between high tow and low tow.
 - c. inadvertent entry into towplane wake turbulence.
 - d. initiation of a turn too early or at an angle of bank greater than that of the towplane.
 - e. initiation of a turn too late or at an angle of bank less than that of the towplane.
3. Demonstrates and simultaneously explains maintaining tow positions from an instructional standpoint.
4. Analyzes and corrects common errors related to maintaining tow positions.

D. TASK: SLACK LINE

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Soaring Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to slack line by describing—
 - a. situations that lead to development of slack line.
 - b. hazards of slack line.
 - c. techniques, which can be used to correct slack line in various situations.
2. Exhibits instructional knowledge of common errors related to slack line by describing—
 - a. failure to take corrective action at the first indication of slack line development.
 - b. use of an improper technique to correct slack line.
 - c. a faulty corrective technique, which can result in excessive stress on towline, weak link, and glider structure.
3. Demonstrates and simultaneously explains slack line from an instructional standpoint.
4. Analyzes and corrects common errors related to slack line.

E. TASK: BOXING THE WAKE

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23;
Soaring Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to boxing the wake by describing—
 - a. performance of a rectangular pattern that keeps glider slightly outside the wake.
 - b. proper control technique and coordination.
 - c. importance of maintaining a taut towline.
2. Exhibits instructional knowledge of common errors related to boxing the wake by describing—
 - a. performance of an excessively large rectangle (moving too far from the wake).
 - b. inappropriate control coordination and technique.
 - c. abrupt or rapid changes of position.
3. Demonstrates and simultaneously explains boxing the wake from an instructional standpoint.
4. Analyzes and corrects common errors related to boxing the wake.

F. TASK: TOW RELEASE

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Soaring Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to tow release by describing—
 - a. why release should be accomplished with normal tension on towline.
 - b. advisability of ensuring that area is clear of other aircraft prior to release.
 - c. clearing turn, which should be made by glider and towplane immediately after release.
 - d. situations when an immediate release should be accomplished.
2. Exhibits instructional knowledge of common errors related to tow release by describing—
 - a. lack of tension on the towline.
 - b. failure to clear area prior to release.
 - c. failure to make proper turn after release.
 - d. release in close proximity to aircraft other than towplane.
3. Demonstrates and simultaneously explains tow release from an instructional standpoint.
4. Analyzes and corrects common errors related to tow release.

G. TASK: ABNORMAL OCCURRENCES

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Soaring Flight Manual.

Objective. To determine that the applicant exhibits instructional knowledge of elements related to abnormal occurrences by describing:

1. Why glider pilot and towplane pilot should agree on a course of action prior to flight.
2. Proper glider pilot response in the event of—
 - a. towplane power loss during takeoff.
 - b. towline break.
 - c. towplane power failure at altitude.
 - d. glider release failure.
 - e. glider and towplane release failure.

GROUND TOW (AUTO OR WINCH)

NOTE: The examiner will select at least one TASK.

H. TASK: BEFORE TAKEOFF CHECK

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Soaring Flight Manual; Glider Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to the before takeoff check by describing—
 - a. reason for performing each checklist item.
 - b. establishment, with crewmembers, of a proper course of action, including visual signals, speeds, wind, and emergency procedures.
 - c. proper procedure for setting altimeter, checking and adjusting controls, and closing and securing canopy(ies).
 - d. use of the appropriate hitch for the type of launch to be conducted.
 - e. proper procedure for checking towline hookup and release mechanism.
 - f. importance of reviewing takeoff emergency procedures.
 - g. method used for ensuring adequate clearance from other traffic.
2. Exhibits instructional knowledge of common errors related to the before takeoff check by describing—
 - a. omission or improper accomplishment of essential items.
 - b. failure to use proper visual signals.
 - c. failure to check or properly adjust controls.
 - d. failure to follow the proper procedure for checking the towline hookup and release mechanism.
 - e. hazards of failure to review takeoff emergency procedures.
3. Demonstrates and simultaneously explains the before takeoff check from an instructional standpoint.
4. Analyzes and corrects common errors related to the before takeoff check.

I. TASK: NORMAL AND CROSSWIND TAKEOFF

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Soaring Flight Manual; Glider Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to a normal and crosswind takeoff by describing—
 - a. proper calculation of launch airspeed.
 - b. glider configuration and positioning on the runway.
 - c. initial positioning of controls.
 - d. use of proper pre-launch and launch visual signals.
 - e. directional control during takeoff roll.
 - f. crosswind control technique.
 - g. pitch attitude and groundtrack during climb.
 - h. proper technique for making adjustments of airspeed and for porpoising.
 - i. proper towline release technique.
2. Exhibits instructional knowledge of common errors related to a normal and crosswind takeoff by describing—
 - a. improper glider configuration.
 - b. improper initial positioning of flight controls.
 - c. use of improper visual signals.
 - d. improper crosswind technique.
 - e. improper climb profile.
 - f. faulty corrective action for adjustment of airspeed and porpoising.
 - g. exceeding maximum launch airspeed.
 - h. improper towline release technique and timing.
3. Demonstrates and simultaneously explains a normal or a crosswind takeoff from an instructional standpoint.
4. Analyzes and corrects common errors related to a normal or a crosswind takeoff.

J. TASK: ABNORMAL OCCURRENCES

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Soaring Flight Manual; Glider Flight Manual.

Objective. To determine that the applicant exhibits instructional knowledge of elements related to abnormal occurrences by describing:

1. Why the glider pilot and crewmembers should agree on a course of action prior to launch.
2. Proper glider pilot response in the event of—
 - a. overrunning the towline.
 - b. launch power failure or towline break.
 - c. inability to release towline.
 - d. porpoising.
3. Methods for emergency release or severance of towline.

SELF-LAUNCH

NOTE: The examiner will select at least one TASK.

K. TASK: ENGINE STARTING

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Glider Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements of engine starting by describing—
 - a. importance of using the appropriate checklist.
 - b. safety precautions related to engine starting.
 - c. effect of atmospheric conditions on engine starting.
 - d. starting procedure, as appropriate.
 - e. adjustment of engine controls during start.
 - f. prevention of glider movement during and after engine start.
2. Exhibits instructional knowledge of common errors related to engine starting by describing—
 - a. failure to use or improper use of the checklist.
 - b. improper or unsafe starting procedure.
 - c. excessively high RPM after starting.
 - d. failure to ensure proper clearance of propeller.
3. Demonstrates and simultaneously explains engine starting from an instructional standpoint.
4. Analyzes and corrects common errors related to engine starting.

L. TASK: TAXIING

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Glider Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to taxiing by describing—
 - a. proper brake check and correct use of brakes.
 - b. compliance with airport surface markings, signals, and clearances.
 - c. how to control direction and speed.
 - d. control positioning for various wind conditions.
 - e. techniques used to avoid other aircraft and hazards, considering wingspan and manoeuvring space required.
2. Exhibits instructional knowledge of the common errors related to taxiing by describing—
 - a. improper use of brakes.
 - b. failure to comply with markings, signals, or clearances.
 - c. hazards of taxiing too fast.
 - d. improper positioning of flight controls for various wind conditions.
 - e. failure to consider wingspan and space required to manoeuvre during taxiing.
3. Demonstrates and simultaneously explains taxiing from an instructional standpoint.
4. Analyzes and corrects common errors related to taxiing.

M. TASK: BEFORE TAKEOFF CHECK

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Glider Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the before takeoff check by describing—
 - a. positioning glider to avoid creating hazards.
 - b. division of attention inside and outside the cockpit.
 - c. importance of following a checklist and responding to each item.
 - d. reasons for ensuring suitable engine temperatures and pressures for run-up and takeoff.
 - e. method used to determine that the glider is in a safe operating condition.
 - f. importance of reviewing takeoff performance airspeeds, expected takeoff distances, wind, and emergency procedures.
 - g. methods for ensuring that takeoff area is free of hazards.
 - h. methods of ensuring adequate clearance from other traffic.
2. Exhibits instructional knowledge of common errors related to the before takeoff check by describing—
 - a. improper positioning of the glider.
 - b. failure to use or improper use of the checklist.
 - c. acceptance of marginal engine performance.
 - d. improper check of flight controls.
 - e. hazards of failure to review takeoff and emergency procedures.
 - f. failure to check for hazards and other traffic.
3. Demonstrates and simultaneously explains the before takeoff check from an instructional standpoint.
4. Analyzes and corrects common errors related to the before takeoff check.

N. TASK: NORMAL AND CROSSWIND TAKEOFF AND CLIMB

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Glider Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to a normal and crosswind takeoff and climb by describing—
 - a. alignment with takeoff path.
 - b. initial positioning of flight controls.
 - c. power application.
 - d. directional control during acceleration on the surface.
 - e. crosswind control technique during acceleration on the surface.
 - f. lift-off attitude and airspeed.
 - g. climb attitude, power setting, and airspeed.
 - h. crosswind correction and track during climb.
 - i. use of checklist, as appropriate.
2. Exhibits instructional knowledge of common errors related to a normal and crosswind takeoff and climb by describing—
 - a. improper initial positioning of flight controls.
 - b. improper power application.
 - c. inappropriate removal of hand from throttle.
 - d. poor directional control.
 - e. improper use of ailerons.
 - f. improper pitch attitude during liftoff.
 - g. failure to establish and maintain proper climb attitude and airspeed.
 - h. drift during climb.
3. Demonstrates and simultaneously explains a normal or crosswind takeoff and climb from an instructional standpoint.
4. Analyzes and corrects common errors related to a normal or crosswind takeoff and climb.

O. TASK: ENGINE SHUTDOWN IN FLIGHT

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Glider Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to engine shutdown in flight by describing—
 - a. establishment of manufacturer’s recommended power setting to ensure engine cooling prior to shutdown.
 - b. establishment of appropriate airspeed.
 - c. shutdown of unnecessary electrical equipment, if appropriate.
 - d. manufacturer’s recommended propeller feathering, positioning, and stowing procedure.
 - e. selection of proper static source, if appropriate.
2. Exhibits instructional knowledge of common errors related to engine shutdown in flight by describing—
 - a. failure to set engine at idle for the specified period of time.
 - b. initiation of feathering procedure at an inappropriate airspeed.
 - c. failure to follow manufacturer’s recommended propeller feathering, positioning, and stowing procedure.
 - d. improper setting of electrical equipment.
 - e. failure to maintain positive aircraft control while performing engine shutdown procedures.
3. Demonstrates and simultaneously explains engine shutdown in flight from an instructional standpoint.
4. Analyzes and corrects common errors related to engine shutdown in flight.

P. TASK: ENGINE RESTART IN FLIGHT

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Glider Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to engine restart in flight by describing—
 - a. establishment of the proper airspeed.
 - b. altitude available to consider restart.
 - c. manufacturer's propeller repositioning and unfeathering procedure.
 - d. operation of engine controls.
 - e. procedure for starting engine by starter or by windmilling.
 - f. proper engine warm-up procedure.
 - g. selection of proper static source, if appropriate.
 - h. proper setting of electrical equipment.
 - i. proper adjustment of propeller pitch.
2. Exhibits instructional knowledge of common errors related to engine restart in flight by describing—
 - a. failure to establish recommended airspeed.
 - b. performance of improper propeller repositioning and unfeathering procedure.
 - c. failure to properly operate engine controls.
 - d. failure to follow prescribed procedure for starting engine by starter or windmilling.
 - e. improper procedure for warm-up.
 - f. improper setting of electrical equipment.
 - g. failure to maintain positive aircraft control while performing engine restart procedures.
3. Demonstrates and simultaneously explains engine restart in flight from an instructional standpoint.
4. Analyzes and corrects common errors related to engine restart in flight.

Q. TASK: ABNORMAL OCCURRENCES

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Soaring Flight Manual; Glider Flight Manual.

Objective. To determine that the applicant exhibits instructional knowledge of the elements related to abnormal occurrences by describing recommended pilot action for:

1. Partial or complete power failure or failure to gain restart.
2. Smoke or fire during ground or flight operations.
3. Loss of engine oil pressure.
4. Low fuel pressure.
5. Engine overheat.
6. Electrical system malfunction.
7. Canopy opening in flight.

LANDINGS

NOTE: The examiner will select at least one TASK.

R. TASK: NORMAL AND CROSSWIND LANDING

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Soaring Flight Manual; Glider Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to a normal and crosswind landing by describing—
 - a. obstructions and other hazards, which should be considered.
 - b. how to determine wind speed and direction.
 - c. proper glidepath to the selected touchdown area, at the recommended airspeed.
 - d. proper use of flaps, spoilers, and dive brakes.
 - e. coordination of flight controls and use of trim.
 - f. crosswind control technique.
 - g. timing, judgment, and control technique during roundout and touchdown.
 - h. directional control after touchdown.
 - i. appropriate wing attitude and proper use of brakes after touchdown.
2. Exhibits instructional knowledge of common errors related to a normal and crosswind landing by describing—
 - a. poor judgment of glidepath and improper use of flaps, spoilers, and dive brakes.
 - b. rough, hesitant, or uncoordinated control technique.
 - c. improper airspeed control.
 - d. improper correction for crosswind.
 - e. improper technique during roundout and touchdown.
 - f. poor directional control after touchdown.
 - g. improper use of brakes.
3. Demonstrates and simultaneously explains a normal or a crosswind landing from an instructional standpoint.
4. Analyzes and corrects common errors related to a normal or a crosswind landing.

S. TASK: SLIPS TO LANDING

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Soaring Flight Manual; Glider Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to slips to landing by describing—
 - a. forward, side, and turning slips, with and without the use of drag devices.
 - b. obstacles and other hazards, which should be considered.
 - c. possible airspeed indication errors.
 - d. proper control usage and crosswind technique.
 - e. timing, judgment, and control technique during transition from slip to touchdown.
 - f. directional control after touchdown.
 - g. appropriate wing attitude and proper use of brakes after touchdown.
2. Exhibits instructional knowledge of common errors related to slips to landing by describing—
 - a. failure to establish recommended glider configuration.
 - b. failure to use proper technique to achieve touchdown accuracy.
 - c. rough, hesitant, or uncoordinated use of controls.
 - d. improper correction for crosswind.
 - e. improper technique during roundout and touchdown.
 - f. poor directional control after touchdown.
 - g. improper use of brakes.
3. Demonstrates and simultaneously explains a slip to landing (without use of drag devices) from an instructional standpoint.
4. Analyzes and corrects common errors related to a slip to landing.

T. TASK: DOWNWIND LANDING

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Soaring Flight Manual; Glider Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to a downwind landing by describing—
 - a. obstructions and other hazards, which should be considered.
 - b. windspeed above which a downwind landing should not be attempted.
 - c. length of the final approach compared with that of a normal landing.
 - d. proper glidepath to selected touchdown area, at the recommended airspeed.
 - e. proper use of flaps, spoilers, and dive brakes to achieve accuracy of touchdown.
 - f. coordination of flight controls and use of trim.
 - g. appropriate correction for wind.
 - h. timing, judgment, and control technique during roundout and touchdown.
 - i. directional control after touchdown.
 - j. appropriate wing attitude and proper use of brakes after touchdown.
2. Exhibits instructional knowledge of common errors related to a downwind landing by describing—
 - a. poor judgment of glidepath and the improper use of flaps, spoilers, and dive brakes.
 - b. rough, hesitant, or uncoordinated use of controls.
 - c. unintentional slowing of airspeed due to higher groundspeed.
 - d. improper correction for wind.
 - e. improper technique during roundout and touchdown.
 - f. poor directional control after touchdown.
 - g. improper use of brakes.
3. Demonstrates and simultaneously explains a downwind landing from an instructional standpoint.
4. Analyzes and corrects common errors related to a downwind landing.

VIII. AREA OF OPERATION: FUNDAMENTALS OF FLIGHT

NOTE: The examiner will select at least one TASK.

A. TASK: STRAIGHT GLIDES

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Soaring Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to straight glides by describing—
 - a. pitch attitude and airspeed.
 - b. establishment and maintenance of a precise ground track.
 - c. effect of flaps, spoilers, and dive brakes.
 - d. use of smooth and coordinated control applications.
 - e. use of trim.
2. Exhibits instructional knowledge of common errors related to straight glides by describing—
 - a. rough or erratic pitch attitude and airspeed control.
 - b. failure to establish and maintain proper wind drift correction.
 - c. effect of improper use of controls when using flaps, spoilers, and dive brakes.
 - d. rough, uncoordinated, or inappropriate control applications.
 - e. failure to trim or improper use of trim.
3. Demonstrates and simultaneously explains straight glides from an instructional standpoint.
4. Analyzes and corrects common errors related to straight glides.

B. TASK: TURNS TO HEADINGS

REFERENCES: FAA-H-8083-9; FAA-S-8081-22, FAA-S-8081-23; Soaring Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to turns to headings by describing—
 - a. proper pitch attitude, angle of bank, and airspeed.
 - b. roll-in and roll-out technique.
 - c. changes in lift, drag, and load factor.
 - d. adverse yaw.
 - e. use of smooth and coordinated control applications.
2. Exhibits instructional knowledge of common errors related to turns to headings by describing—
 - a. rough or uncoordinated use of controls during roll-in and roll-out.
 - b. failure to establish desired angle of bank.
 - c. lack of precision in completion of a turn to a heading.
3. Demonstrates and simultaneously explains turns to headings from an instructional standpoint.
4. Analyzes and corrects common errors related to turns to headings.

IX. AREA OF OPERATION: PERFORMANCE AIRSPEEDS

NOTE: The examiner will select at least one TASK.

A. TASK: MINIMUM SINK AIRSPEED

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Soaring Flight Manual; Glider Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to minimum sink airspeed by describing—
 - a. related aerodynamic factors.
 - b. use of this speed.
 - c. establishment and maintenance of this speed.
2. Exhibits instructional knowledge of common errors related to minimum sink airspeed by describing—
 - a. incorrect determination of this speed.
 - b. rough or erratic pitch attitude and airspeed control.
3. Demonstrates and simultaneously explains minimum sink airspeed from an instructional standpoint.
4. Analyzes and corrects common errors related to minimum sink airspeed.

B. TASK: SPEED-TO-FLY

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Soaring Flight Manual; Glider Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to speed-to-fly by describing—
 - a. factors related to the determination of speed-to-fly.
 - b. use of this speed.
 - c. establishment and maintenance of this speed for a given situation.
2. Exhibits instructional knowledge of common errors related to speed-to-fly by describing—
 - a. improper determination of this speed.
 - b. rough or erratic pitch attitude and airspeed control.
3. Demonstrates and simultaneously explains speed-to-fly from an instructional standpoint.
4. Analyzes and corrects common errors related to speed-to-fly.

X. AREA OF OPERATION: SOARING TECHNIQUES

NOTE: The examiner will select at least one TASK. The TASK selected will be appropriate to the geographical location and existing atmospheric conditions. If conditions do not permit a demonstration of soaring skills, applicants will be expected to demonstrate satisfactory instructional knowledge of the selected TASK through oral testing.

A. TASK: THERMAL SOARING

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Soaring Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to thermal soaring by describing—
 - a. the process by which thermals are produced.
 - b. recognition of the presence of a thermal.
 - c. initial entry into a thermal.
 - d. analysis of a thermal's structure and determination of the direction of turn to remain within a thermal.
 - e. coordinated use of controls and proper planning to remain within a thermal.
 - f. importance of maintaining orientation with ground references, wind, and other aircraft.
 - g. importance of maintaining proper airspeeds in and between thermals.
 - h. use of proper techniques to re-enter a thermal.
2. Exhibits instructional knowledge of common errors related to thermal soaring by describing—
 - a. failure to maintain proper airspeeds in and between thermals.
 - b. poor division of attention resulting in failure to recognize when entering or flying out of a thermal.
 - c. improper technique during initial entry into a thermal.
 - d. faulty control coordination and planning to remain within a thermal.
 - e. faulty division of attention in maintaining orientation with ground references and wind.
 - f. failure to properly scan for other aircraft.
 - g. poor planning and technique when attempting to re-enter a thermal.
3. Demonstrates and simultaneously explains thermal soaring from an instructional standpoint.
4. Analyzes and corrects common errors related to thermal soaring.

B. TASK: RIDGE AND SLOPE SOARING

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Soaring Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to ridge and slope soaring by describing—
 - a. terrain features and wind conditions that create orographic lift.
 - b. importance of an accurate estimate of terrain height.
 - c. initial entry into an area of lift.
 - d. importance of smooth, precise, and coordinated use of controls.
 - e. maintenance of a safe lateral distance from the terrain.
 - f. use of proper techniques to re-enter an area of lift.
 - g. procedures for approaching and crossing ridges.
 - h. importance of planning to fly within a safe gliding distance of an acceptable landing area.
 - i. maintenance of orientation with ground references and other aircraft.
 - j. importance of being constantly alert for changing weather conditions.
2. Exhibits instructional knowledge of common errors related to ridge and slope soaring by describing—
 - a. hazards of approaching the ridge or slope lift area at approximately a 90° angle or from the downwind side.
 - b. failure to maintain proper airspeed while in the area of lift.
 - c. poor division of attention resulting in failure to promptly recognize when leaving the area of lift or entering a high sink area.
 - d. poor control coordination.
 - e. poor division of attention in maintaining orientation with ground references and wind.
 - f. failure to properly scan for other aircraft.
 - g. failure to plan the flight so an acceptable landing area is within gliding distance.
3. Demonstrates and simultaneously explains ridge and slope soaring from an instructional standpoint.
4. Analyzes and corrects common errors related to ridge and slope soaring.

C. TASK: WAVE SOARING

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Soaring Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to wave soaring by describing—
 - a. terrain and weather conditions that create standing waves.
 - b. location of and technique for entering an area of lift.
 - c. importance of smooth, precise, and coordinated use of controls.
 - d. use of proper techniques to re-enter an area of lift.
 - e. maintenance of orientation with ground references and other aircraft.
 - f. recognition of rotor and wave turbulence.
 - g. coordination with air traffic control, as appropriate.
 - h. maintenance of proper airspeeds.
 - i. importance of being constantly alert for changing weather conditions.
 - j. importance of having proper equipment and training for high altitude flight.
2. Exhibits instructional knowledge of common errors related to wave soaring by describing—
 - a. erratic airspeed control while in the turbulence of a rotor.
 - b. failure to maintain proper airspeed while in an area of lift.
 - c. rough control technique.
 - d. poor division of attention resulting in failure to promptly recognize when leaving an area of lift or entering a high sink area.
 - e. faulty control coordination and planning to remain within the area of lift.
 - f. poor division of attention in maintaining orientation with ground references and wind.
 - g. failure to properly scan for other aircraft.
 - h. failure to have proper equipment and training for high altitude flight.
3. Demonstrates and simultaneously explains wave soaring from an instructional standpoint.
4. Analyzes and corrects common errors related to wave soaring.

XI. AREA OF OPERATION: PERFORMANCE MANEUVERS

NOTE: The examiner will select at least one TASK.

A. TASK: STEEP TURNS

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Soaring Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to steep turns by describing—
 - a. relationship of bank angle, load factor, and stalling speed.
 - b. overbanking tendency.
 - c. establishment of the recommended entry airspeed.
 - d. orientation, division of attention, and planning.
 - e. coordination of flight controls.
 - f. entry and roll-out technique.
2. Exhibits instructional knowledge of common errors related to steep turns by describing—
 - a. uncoordinated use of flight controls.
 - b. loss of orientation.
 - c. unintentional stall or spin.
 - d. excessive deviation from desired heading during roll-out.
3. Demonstrates and simultaneously explains steep turns from an instructional standpoint.
4. Analyzes and corrects common errors related to steep turns.

B. TASK: RECOVERY FROM A SPIRAL DIVE

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; Soaring Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to recovery from a spiral dive by describing—
 - a. conditions that cause high-speed spirals.
 - b. recognition of situation when a spiral dive is developing.
 - c. procedures for recovery from a high-speed spiral dive.
 - d. importance of using smooth control applications during recovery.
2. Exhibits instructional knowledge of common errors related to recovery from a spiral dive by describing—
 - a. failure to recognize when a spiral dive is developing.
 - b. rough, abrupt, and/or uncoordinated control applications during recovery.
 - c. improper sequence of control applications.
 - d. potential consequences from delaying recovery.
3. Demonstrates and simultaneously explains recovery from a spiral dive from an instructional standpoint.
4. Analyzes and corrects common errors related to recovery from a spiral dive.

**XII. AREA OF OPERATION: SLOW FLIGHT, STALLS,
AND SPINS**

NOTE: The examiner will select at least one TASK.

**A. TASK: MANEUVERING AT MINIMUM CONTROL
AIRSPEED**

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Soaring Flight Manual; Glider Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to maneuvering at minimum control airspeed by describing—
 - a. establishment and maintenance of appropriate airspeed.
 - b. flight characteristics to include controllability.
 - c. importance of maintaining an appropriate airspeed in turbulent air or as bank is increased.
 - d. importance of smooth, coordinated control applications.
 - e. proper technique for avoiding a stall when raising a lowered wing.
 - f. recovery to desired airspeed.
2. Exhibits instructional knowledge of common errors related to maneuvering at minimum control airspeed by describing—
 - a. failure to establish or to maintain slow airspeed, as requested.
 - b. improper use of trim.
 - c. rough or uncoordinated use of controls.
 - d. lack of pilot recognition of the first indications of a stall.
 - e. failure to use proper technique to avoid a stall in turbulent air or during a turn.
 - f. faulty technique when raising a lowered wing.
3. Demonstrates and simultaneously explains maneuvering at minimum control airspeed from an instructional standpoint.
4. Analyzes and corrects common errors related to maneuvering at minimum control airspeed.

B. TASK: STALL RECOGNITION AND RECOVERY

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Soaring Flight Manual; Glider Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to stall recognition and recovery by describing—
 - a. aerodynamics of stalls.
 - b. relationship of various factors, such as weight, centre of gravity, load factor, flaps, spoilers, dive brakes, and angle of bank to stalls.
 - c. flight situations where unintentional stalls may occur.
 - d. recognition of the first indications of a stall.
 - e. performance of stalls in various configurations.
 - f. entry technique and minimum entry altitude.
 - g. coordination of flight controls.
 - h. recovery technique and minimum recovery altitude.
2. Exhibits instructional knowledge of common errors related to stall recognition and recovery by describing—
 - a. failure to establish the specified configuration prior to entry.
 - b. improper pitch, heading, and bank control during straight-ahead stalls.
 - c. improper pitch and bank control during turning stalls.
 - d. rough or uncoordinated control technique.
 - e. failure to recognize the first indications of a stall.
 - f. failure to achieve a stall.
 - g. poor stall recognition and delayed recovery.
 - h. excessive altitude loss, excessive speed, or secondary stall during recovery.
3. Demonstrates and simultaneously explains stall recognition and recovery from an instructional standpoint.
4. Analyzes and corrects common errors related to stall recognition and recovery.

C. TASK: SPINS

NOTE: At the discretion of the examiner, a logbook record attesting applicant instructional competency in spin entries, spins, and spin recoveries may be accepted in lieu of this TASK. Logbook record shall be certified by the flight instructor who conducted the spin instruction.

REFERENCES: 14 CFR part 23; FAA-H-8083-9, FAA-H-8083-13; Soaring Flight Manual; Glider Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to spins by describing—
 - a. aerodynamics of spins.
 - b. gliders approved for the spin manoeuvre based on the airworthiness category and type certificate.
 - c. relationship of various factors, such as configuration, weight, centre of gravity, and control coordination to spins.
 - d. flight situations where unintentional spins may occur.
 - e. how to recognize and recover from imminent, unintentional spins.
 - f. entry technique and minimum entry altitude for intentional spins.
 - g. control technique to maintain a spin.
 - h. orientation during a spin.
 - i. recovery technique and minimum recovery altitude for intentional spins.
 - j. anxiety factors associated with spin instruction.
2. Exhibits instructional knowledge of common errors related to spins by describing—
 - a. hazards of attempting to spin a glider not approved for spins.
 - b. failure to establish proper configuration prior to spin entry.
 - c. failure to recognize indications leading to a spin.
 - d. failure to achieve and maintain a stall during spin entry.
 - e. improper use of flight controls during spin entry, rotation, or recovery.
 - f. disorientation during a spin.
 - g. failure to distinguish between a high-speed spiral and a spin.
 - h. excessive speed or accelerated stall during recovery.
 - i. failure to recover with minimum loss of altitude.

3. Demonstrates and simultaneously explains a spin from an instructional standpoint.
4. Analyzes and corrects common errors related to a spin.

XIII. AREA OF OPERATION: EMERGENCY OPERATIONS

NOTE: The examiner will select at least one TASK.

A. TASK: SIMULATED OFF-AIRPORT LANDING

REFERENCES: FAA-H-8083-9, FAA-H-8083-13; FAA-S-8081-22, FAA-S-8081-23; Soaring Flight Manual; Glider Flight Manual.

NOTE: This landing will be performed at an established airport.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to a simulated off-airport landing by describing—
 - a. selection of a suitable landing area.
 - b. obstacles and other hazards to be considered.
 - c. how to estimate wind speed and direction.
 - d. planning and execution of the approach to the selected landing area without use of the altimeter.
 - e. techniques that can be used to compensate for undershooting or overshooting selected landing area.
2. Exhibits instructional knowledge of common errors related to a simulated off-airport landing by describing—
 - a. improper airspeed control.
 - b. poor judgment in the selection of a landing area.
 - c. failure to properly estimate wind speed and direction
 - d. failure to fly the most suitable pattern for existing situation.
 - e. undershooting or overshooting selected landing area.
3. Demonstrates and simultaneously explains a simulated off-airport landing from an instructional standpoint.
4. Analyzes and corrects common errors related to a simulated off-airport landing.

B. TASK: EMERGENCY EQUIPMENT AND SURVIVAL GEAR

REFERENCES: FAA-S-8081-22, FAA-S-8081-23; Soaring Flight Manual; Glider Flight Manual.

Objective. To determine that the applicant exhibits instructional knowledge of the elements related to emergency equipment and survival gear, appropriate to the glider used for the skill test, by describing:

1. Location in the glider.
2. Method of operation or use.
3. Servicing and storage.
4. Inspection, fitting, and use of parachutes.
5. Equipment and gear appropriate for operation in various climates and over various types of terrain.

XIV. AREA OF OPERATION: POSTFLIGHT PROCEDURES

TASK: AFTER-LANDING AND SECURING

REFERENCES: FAA-H-8083-9; FAA-S-8081-22, FAA-S-8081-23; Glider Flight Manual.

Objective. To determine that the applicant:

1. Exhibits instructional knowledge of the elements related to after-landing and securing by describing—
 - a. clearing of the runway/landing area.
 - b. taxi and engine shutdown procedures, as appropriate.
 - c. parking and securing procedure.
 - d. postflight inspection.
 - e. refueling, as appropriate.
2. Exhibits instructional knowledge of common errors related to after-landing and securing by describing—
 - a. hazards of failure to follow recommended procedures.
 - b. poor planning and judgment in the performance of after-landing procedures.
3. Demonstrates and simultaneously explains after-landing and securing from an instructional standpoint.
4. Analyzes and corrects common errors related to after-landing and securing.

APPENDIX

TASK VS. FLIGHT SIMULATION TRAINING DEVICE CREDIT

Reserved