U.S. Department
of Transportation

**Federal Aviation
Administration**

FAA-S-8081-8

FLIGHT INSTRUCTOR

PRACTICAL TEST STANDARDS

for

GLIDER

OCTOBER 1987

**FLIGHT STANDARDS SERVICE
Washington, DC 20591**

FLIGHT INSTRUCTOR
GLIDER

PRACTICAL TEST STANDARD

1987

OFFICE OF FLIGHT STANDARDS

FOREWORD

This Flight Instructor-Glider Practical Test Standards book has been published by the Federal Aviation Administration to establish the standards for the flight instructor certification practical tests for the glider category. FAA inspectors and designated pilot examiners will conduct practical tests in compliance with these standards. Flight instructors and applicants will find these standards helpful in practical test preparation.

Robert L. Goodrich
Director of Flight Standards

NOTE

Examiners may use either the advisory circular flight test guides or these practical test standards to evaluate flight instructor applicants until August 31, 1988. After that date the advisory circular flight test guides pertinent to the flight instructor applicant will be superseded and the practical test standards will be in effect.

INTRODUCTION

The Aviation Standards National Field Office of the FAA (Federal Aviation Administration) has developed this practical test book as a standard to be used by FAA inspectors and designated pilot examiners when conducting flight instructor glider practical tests. Flight instructors are expected to use this book when preparing flight instructor applicants for practical tests.

This publication may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

The FAA gratefully acknowledges the valuable assistance provided by organizations and individuals who have contributed their time and talent in redesigning the practical test standards.

Comments regarding this publication should be directed to:

U.S. Department of Transportation
Federal Aviation Administration
Aviation Standards National Field Office
Examinations Standards Branch, AVN-130
P.O. Box 25082
Oklahoma City, Oklahoma 73125

PRACTICAL TEST STANDARD CONCEPT

FAR's (Federal Aviation Regulations) specify the areas in which knowledge and skill must be demonstrated by the applicant before the issuance of a flight instructor certificate with the associated class ratings. The FAR's provide the flexibility that permits the FAA to publish practical test standards containing specific TASKS in which competency must be demonstrated by the applicant before the issuance of a flight instructor certificate. The FAA will add, delete, or revise TASKS whenever it is determined that changes are needed in the interest of safety. Adherence to the provisions of the FAR's and the practical test standards is mandatory for the evaluation of flight instructor applicants.

FLIGHT INSTRUCTOR RESPONSIBILITY

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.

An appropriately rated flight instructor is responsible for training the flight instructor applicant to acceptable standards in ALL of the subject

matter areas, procedures, and maneuvers included in the TASKS of this test book. The flight instructor must certify that the applicant:

(1) is able to make a practical application of the fundamentals of instruction;
(2) is competent to teach the subject matter, procedures, and maneuvers included in the standard to students with varying backgrounds and levels of experience and ability;
(3) is able to perform the procedures and maneuvers included in the standard to at least the COMMERCIAL PILOT SKILL LEVEL[1] while giving effective flight instruction; and
(4) is competent to pass the required practical test for the issuance of the flight instructor certificate with the associated category and class ratings or for the addition of a category and/or class rating to a flight instructor certificate.

Throughout the applicant's training, the flight instructor is responsible for emphasizing the performance of, and ability to teach, effective visual scanning and collision avoidance procedures. These areas are covered in AC 90-49, Pilots' Role in Collision Avoidance; AC 61-21, Flight Training Handbook; AC 61-23. Pilot's Handbook of Aeronautical Knowledge; and the Airman's Information Manual.

Examiner[2] RESPONSIBILITY

The examiner who conducts the practical test is responsible for determining that the applicant meets acceptable standards of knowledge, skill, and teaching ability in the selected TASKS. This determination requires the evaluation of the applicant's:

(1) ability to apply the fundamentals of instruction;
(2) knowledge of, and ability to teach, the subject matter, procedures, and maneuvers covered in the TASKS; and
(3) ability to perform the procedures and maneuvers covered in the TASKS to at least the COMMERCIAL PILOT SKILL LEVEL while giving effective flight instruction.[1]

It is intended that oral questioning be used at any time during the ground or flight portion of the practical test to determine that the

[1]The term "Commercial Pilot Skill Level" is defined, for the purpose of this publication, as performing a procedure or maneuver within the tolerances listed in the FAA Commercial Pilot Practical Test Standards. If the maneuver appears only in a Private Pilot Practical Test Standard, the term means that the applicant's performance is expected to be "more precise" than that indicated by the stated tolerances. This "more precise" performance must be determined by the examiner through the exercise of subjective judgment.

[2]The word "examiner" is used throughout this standard to denote either the FAA inspector or FAA designated pilot examiner who conducts an official flight test.

applicant can instruct effectively and has a comprehensive knowledge of the TASKS and their related safety factors.

Throughout the flight portion of the test, the examiner will evaluate the applicant's use of visual scanning and collision avoidance procedures, and the applicant's ability to teach those procedures.

FLIGHT INSTRUCTOR PRACTICAL TEST BOOK DESCRIPTION

FAA-S-8081-8, Flight Instructor - Glider Practical Test Book contains the glider practical test standards; FAA-S-8081-6, Flight Instructor - Airplane Practical Test Book, contains the airplane single-engine and the airplane multiengine practical test standards; FAA-S-8081-7, Flight Instructor - Rotorcraft Practical Test Book, contains the helicopter and the gyroplane practical test standards; FAA-S-8081-9, Flight Instructor - Instrument Practical Test Book, contains the instrument airplane and the instrument rotorcraft/helicopter practical test standards.

The loose-leaf feature of the flight instructor practical test books permits the revision of the basic publication by means of change pages. Change pages will be made available for purchase through the Superintendent of Documents. Change pages will be prepared when required by changes in the FAR's, FAA policy, or in emphasis areas related to safety. A revised practical test book will be developed when more than 50 percent of the pages have been changed.

The Flight Instructor Practical Test Standards include the AREAS OF OPERATION and TASKS for the issuance of an initial flight instructor certificate and for the addition of category and/or class ratings to that certificate.

INITIAL FLIGHT INSTRUCTOR CERTIFICATION

An applicant who seeks initial flight instructor certification will be evaluated in all AREAS OF OPERATION of the standard appropriate to the rating(s) sought. This evaluation will include at least one TASK in each AREA OF OPERATION and will always include the required TASKS.

INITIAL CERTIFICATION

INITIAL CATERGORY AND/OR CLASS RATING(S) SOUGHT	APPLICABLE BOOK AND SECTION
ASE	FAA-S-8081-6, Section 1
AME	FAA-S-8081-6, Section 2
RH	FAA-S-8081-7, Section 1
RG	FAA-S-8081-7, Section 2
G	FAA-S-8081-8
IA	FAA-S-8081-9
IH	FAA-S-8081-9

ADDITION OF AIRCRAFT CATEGORY AND/OR CLASS RATINGS TO A FLIGHT INSTRUCTOR CERTIFICATE

An applicant who holds a flight instructor certificate and seeks an additional aircraft category and/or class rating will be evaluated in at least the AREAS OF OPERATION and TASKS that are unique and appropriate to the rating(s) sought (see table at the beginning of each standard). At the discretion of the examiner, the evaluation of the applicant's competence in AREAS OF OPERATION and TASKS which are "common" to ALL aircraft categories and classes MAY be repeated. An example of this is Fundamentals of Instruction.

ADDITION OF RATING(S)

FLIGHT INSTRUCTOR CERTIFICATE AND RATING(S) HELD	ADDITIONAL CATEGORY AND/OR CLASS RATING(S) SOUGHT	APPLICABLE BOOK AND SECTION
AME, RH, RG, G, IA, or IH	ASE	FAA-S-8081-6, Section 1
ASE, RH, RG, G, IA, or IH	AME	FAA-S-8081-6, Section 2
ASE, AME, RG, G, IA, or IH	RH	FAA-S-8081-7, Section 1
ASE, AME, RH, G, IA, or IH	RG	FAA-S-8081-7, Section 2
ASE, AME, RH, RG, IA, or IH	G	FAA-S-8081-8
ASE, AME, RH, RG, G, or IH	IA	FAA-S-8081-9
ASE, AME, RH, RG, G, or IA	IH	FAA-S-8081-9

LEGEND —
ASE Airplane Single-Engine
AME Airplane Multiengine
RH Rotorcraft Helicopter
RG Rotorcraft Gyroplane
G Glider
IA Instrument Airplane
IH Instrument Helicopter

NOTE: When administering tests based on FAA-S-8081-6, Sections 1 and 2, the TASKS appropriate to the class airplane (land or sea) used for the practical test should be included.

FLIGHT INSTRUCTOR PRACTICAL TEST STANDARD DESCRIPTION

The AREAS OF OPERATION are phases of the practical test, beginning with Fundamentals of Instruction and ending with Approaches, Landings, and After Landing Procedures. The examiner, however, may conduct the practical test in any sequence that results in a complete and efficient test.

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

The abbreviation(s) within parentheses immediately following a TASK title refer to the CATEGORY and/or CLASS aircraft appropriate to that TASK. The meaning of each abbreviation follows:

ASEL	Airplane, Single Engine Land
AMEL	Airplane, Multiengine Land
ASES	Airplane, Single-Engine Sea
AMES	Airplane, Multiengine Sea
RH	Rotorcraft Helicopter
RG	Rotorcraft Gyroplane
G	Glider
IA	Instrument Airplane
IH	Instrument Helicopter

The REFERENCE identifies the publication(s) that describe the TASK. Descriptions of TASKS and maneuver tolerances are not included in the flight instructor standards because this information can be found in references listed for each TASK. Publications other than those listed may be used as references if their content conveys substantially the same meaning as the referenced publications. References listed in the four practical test books include the current revisions of the following publications:

FAR Part 61	Certification: Pilots and Flight Instructors
FAR Part 91	General Operating and Flight Rules
AC 00-6	Aviation Weather
AC 00-45	Aviation Weather Services
AC 60-14	Aviation Instructor's Handbook
AC 61-13	Basic Helicopter Handbook
AC 61-21	Flight Training Handbook
AC 61-23	Pilot's Handbook of Aeronautical Knowledge
AC 61-27	Instrument Flying Handbook
AC 61-65	Certification: Pilots and Flight Instructors
AC 61-84	Role of Preflight Preparation
AC 61-92	Use of Distractions During Pilot Certification Flight Tests
AC 61-94	Pilot Transition Course for Self-Launching or Powered Sailplanes (motor gliders)
AC 67-2	Medical Handbook for Pilots
AC 90-48	Pilots' Role in Collision Avoidance
AC 91-13	Cold Weather Operation of Aircraft
FAA-S-8081-1	Private Pilot Practical Test Standards
FAA-S-8081-2	Commercial Pilot Practical Test Standards
FAA-S-8081-4	Instrument Rating Practical Test Standards

AIM	Airman's Information Manual Pertinent Pilot Operating Handbooks and FAA Approved Flight Manuals
IAP's	Instrument Approach Procedures
SID's	Standard Instrument Departures
STAR's	Standard Terminal Arrivals
AFD	Airport Facility Directory
NOTAM's	Notices to Airmen

Each TASK has an OBJECTIVE. The examiner determines that the applicant meets the TASK OBJECTIVE through the demonstration of competency in various elements of knowledge and/or skill. The OBJECTIVES of TASKS in certain AREAS OF OPERATION, such as Fundamentals of Instruction and Technical Subject Areas, include ONLY knowledge elements. The OBJECTIVES of TASKS in the AREAS OF OPERATION that include elements of skill as well as knowledge also include common errors which the applicant should be able to describe, recognize, analyze, and correct.

The OBJECTIVE of a TASK that involves pilot skill consists of four parts. Those four parts include the determination that the applicant exhibits:

(1) instructional knowledge of the elements of a TASK. This is accomplished through descriptions, explanations, and simulated instruction;

(2) instructional knowledge of common errors related to a TASK, including their recognition, analysis, and correction;

(3) the ability to demonstrate and simultaneously explain the key elements of a TASK. The TASK demonstration must be to the commercial pilot standards and the teaching techniques and procedures should conform to those set forth in AC 60-14, Aviation Instructor's Handbook, and AC 61-21, Flight Training Handbook; and

(4) the ability to analyze and correct common errors related to a TASK.

The ACTION assists the examiner in ensuring that the OBJECTIVE is met.

USE OF THE PRACTICAL TEST BOOK

All the procedures and maneuvers in the Private Pilot, Commercial Pilot, and Instrument Rating Practical Test Standards have been included in the Flight Instructor Practical Test Standards; however, to permit the completion of the practical test for initial certification within a reasonable timeframe, the examiner will select one or more TASKS in each AREA OF OPERATION. In certain AREAS OF OPERATION, there are “required TASKS” which the examiner must select.

The term “instructional knowledge” means the “what,” “why,” and “how” of a subject matter topic, procedure, or maneuver. It also means that the flight instructor applicant’s discussions, explanations, and descriptions should follow the recommended teaching procedures and techniques explained in AC 60-14, Aviation Instructor’s Handbook.

The FAA requires that each practical test for the issuance of a flight instructor certificate with an associated rating, or for the addition of a category and/or class rating to that certificate, be conducted in accordance with the appropriate Flight Instructor Practical Test Standard and the policies set forth in the INTRODUCTION. it is emphasized that the flight instructor applicant must be prepared to demonstrate the ability to instruct effectively in ALL TASKS included in the AREAS OF OPERATION of the appropriate practical test standard.

In preparation for the practical test, the examiner will develop a “plan of action.” The “plan of action” for an initial certification test will include one or more TASKS in each AREA OF OPERATION and will ALWAYS include the “required TASKS.” The examiner should ALWAYS require the performance of additional TASKS if there is any doubt regarding the applicant’s competence in a particular AREA OF OPERATION.

The “plan of action” for a test administered for the addition of an aircraft category and/or class rating to a flight instructor certificate will include the required AREAS OF OPERATION, as indicated in the table at the beginning of each standard. The “required TASKS” appropriate to the rating(s) sought must also be included. Notes following the titles of most AREAS OF OPERATION direct the examiner to “select at least one TASK.” In a few instances, the notes identify “required TASKS.”

With the exception of the “required TASKS,” the examiner will not tell the applicant in advance which TASKS will be included in the “plan of action.” The applicant should be well prepared in ALL knowledge and skill areas included in the standard. Throughout the flight portion of the practical test, the examiner will evaluate the applicant’s ability to simultaneously demonstrate and explain procedures and maneuvers, and to give flight instruction to students at various stages of flight training and levels of experience.

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 WILL NOT SIMULATE AN ERROR 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 FAA considers their frequency of occurrence justification for their inclusion in the TASK OBJECTIVES.

The examiner will place special emphasis on the applicant's demonstrated ability to teach precise aircraft control and sound judgment in decision making. The evaluation of the applicant's ability to teach judgment will 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 will also emphasize the evaluation of the applicant's demonstrated ability to teach stall/spin awareness, spatial disorientation, collision avoidance, wake turbulence avoidance, low-level wind shear avoidance, checklist usage, the use of distractions, and other areas directed by future revisions of the standard.

INSTRUCTOR PRACTICAL TEST PREREQUISITES

An applicant for a flight instructor initial certification practical test is required by FAR's to:

(1) have passed the appropriate flight instructor written test(s) within 24 months before the date of the application for the practical test;
(2) hold a commercial pilot or airline transport pilot certificate with an aircraft rating appropriate to the flight instructor rating sought;
(3) hold an instrument rating, if applying for an airplane or an instrument instructor rating;
(4) have the prescribed aeronautical experience and instruction for a flight instructor certificate with the rating sought;
(5) have reached the age of 18 years; and
(6) have a logbook endorsement from a qualified instructor certifying that the applicant has been given flight instruction in the items required by FAR Section 61.187(a) and has been found competent to pass a practical test on those items.

An applicant for a practical test for the addition of a rating on a flight instructor certificate is required by FAR's to:

(1) hold an effective pilot certificate with ratings appropriate to the flight instructor rating sought;
(2) have at least 15 hours as pilot in command in the category and class aircraft appropriate to the rating sought; and
(3) have passed the written and practical test prescribed for the issuance of a flight instructor certificate with the rating sought.

AIRCRAFT AND EQUIPMENT REQUIRED FOR THE PRACTICAL TEST

The instructor applicant is required by FAR Section 61.45 to provide an airworthy, certificated aircraft for use during the practical test. This section further requires that the aircraft:

(1) have fully functioning dual controls, except as provided for in FAR Section 61.45(c) and (e); and
(2) be capable of performing all the TASKS appropriate for the instructor rating sought and have no operating limitations which prohibit the performance of those operations.

SATISFACTORY PERFORMANCE

The practical test is passed if, in the judgment of the examiner, the applicant demonstrates satisfactory performance with regard to:

(1) knowledge of the fundamentals of instruction;
(2) knowledge of the technical subject areas;
(3) knowledge of the flight instructor's responsibilities concerning the pilot certification process;
(4) knowledge of the flight instructor's responsibilities concerning logbook entries and pilot certificate endorsements;
(5) ability to demonstrate the procedures and maneuvers selected by the examiner to at least the COMMERCIAL PILOT SKILL LEVEL, while giving effective instruction;
(6) competence in teaching the procedures and maneuvers selected by the examiner;
(7) competence in describing, recognizing, analyzing, and correcting common errors simulated by the examiner; and
(8) knowledge of the development and effective use of a course of training, a syllabus, and a lesson plan.

UNSATISFACTORY PERFORMANCE

If, in the judgment of the examiner, the applicant does not meet the standards of performance of any TASK performed, the associated AREA OF OPERATION is failed and therefore, the practical test is failed. The examiner or applicant may discontinue the test at any time after the failure of an AREA OF OPERATION makes the applicant ineligible for the certificate or rating sought. The test will be continued ONLY with the consent of the applicant. If the test is discontinued, the applicant is entitled to credit for only those AREAS OF OPERATION satisfactorily performed. However, during the retest, and at the discretion of the examiner, any TASK may be re-evaluated, including those previously passed.

Failure to perform a procedure or maneuver at the COMMERCIAL PILOT SKILL LEVEL, while giving effective flight instruction, is unsatisfactory performance. Any action, or lack thereof, by the applicant which requires corrective intervention by the examiner to maintain safe flight shall be disqualifying. IT IS VITALLY IMPORTANT that the applicant use proper and effective visual scanning techniques to clear the area before performing maneuvers. Ineffective performance in these areas will be disqualifying.

Failure to provide an effective instructional explanation, while demonstrating a procedure or maneuver, is unsatisfactory performance. The applicant's explanation during the demonstration must be clear, concise, technically accurate, and complete. No prompting from the examiner should be necessary.

ADDITION OF A GLIDER CLASS RATING TO A FLIGHT INSTRUCTOR CERTIFICATE						
REQUIRED AREAS OF OPERATION	FLIGHT INSTRUCTOR CERTIFICATE AND RATING HELD					
	ASE	**AME**	**RH**	**RG**	**IA**	**IH**
I	NO	NO	NO	NO	NO	NO
II	YES	YES	YES	YES	YES	YES
III	YES	YES	YES	YES	YES	YES
IV	NO	NO	NO	NO	NO	NO
V	YES	YES	YES	YES	YES	YES
VI	YES*	YES*	YES*	YES*	YES*	YES*
VII	YES*	YES*	YES*	YES*	YES*	YES*
VIII	YES*	YES*	YES*	YES*	YES*	YES*
IX	YES	YES	YES	YES	YES	YES
X	YES	YES	YES	YES	YES	YES
XI	YES	YES	YES	YES	YES	YES
XII	YES	YES	YES	YES	YES	YES

NOTE

The applicant whose commercial pilot certificate is NOT LIMITED with regard to type launch (aero tow, ground tow, or powered glider self-launch) will be evaluated in ONLY one type launch. The applicant's instructing privileges will include all three type launches.

The applicant whose commercial pilot certificate is LIMITED to one or two of the three types of launches (aero tow, ground tow, or powered glider self-launch) will be evaluated in ONLY one of those launches. The applicant's instructing privileges will include ONLY the type(s) launch(es) that appear as limitation(s) on the applicant's commercial pilot certificate.

CONTENTS

I. AREA OF OPERATION:
FUNDAMENTALS OF INSTRUCTION

NOTE: The examiner will select at least one TASK.

A. TASK: THE LEARNING PROCESS (G)

REFERENCE: AC 60-14.

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

- **a.** The definition of learning.
- **b.** Characteristics of learning.
- **c.** The practical application of the laws of learning.
- **d.** Factors involved in how people learn.
- **e.** Recognition and proper use of the various levels of learning.
- **f.** Principles that are applied in learning a skill.
- **g.** Factors related to forgetting and retention.
- **h.** How transfer of learning affects the learning process.
- **i.** How the formation of habit patterns affects the learning process.

2. Action. The examiner will determine that the applicant's performance meets the objective by asking the applicant to describe the elements of the learning process.

B. TASK: THE TEACHING PROCESS (G)

REFERENCE: AC 60-14.

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

- **a.** Preparation for a lesson or an instructional period.
- **b.** Presentation of knowledge and skills, including the methods which are suitable in particular situations.
- **c.** Application, by the student, of the knowledge and skills presented by the instructor.
- **d.** Review of the material presented and the evaluation of student performance and accomplishment.

2. Action. The examiner will determine that the applicant's performance meets the objective by asking the applicant to describe the elements of the teaching process.

C. TASK: TEACHING METHODS (G)

REFERENCE: AC 60-14.

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

- **a.** The organization of a lesson—introduction, development, and conclusion.
- **b.** The lecture method.
- **c.** The guided discussion method.
- **d.** The demonstration—performance method.
- **e.** Programmed instruction.
- **f.** Audio-visual instruction.

2. Action. The examiner will determine that the applicant's performance meets the objective by asking the applicant to describe the elements of teaching methods.

D. TASK: EVALUATION (G)

REFERENCE: AC 60-14.

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

- **a.** The purpose of evaluation.
- **b.** The characteristics of effective oral questions.
- **c.** Types of oral questions to avoid.
- **d.** Responses to student questions.
- **e.** Characteristics and development of effective written tests.
- **f.** Characteristics and uses of performance tests, specifically, the FAA practical test standards.

2. Action. The examiner will determine that the applicant's performance meets the objective by asking the applicant to describe the instructor's role as an evaluator.

E. TASK: FLIGHT INSTRUCTOR CHARACTERISTICS AND RESPONSIBILITIES (G)

REFERENCE: AC 60-14.

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

- **a.** Major considerations and qualifications which must be included in flight instructor professionalism.
- **b.** Role of the flight instructor as a practical psychologist, including the understanding of anxiety, stress, and psychological abnormalities.
- **c.** Flight instructor's responsibility with regard to student pilot supervision and surveillance.
- **d.** Flight instructor's authority and responsibility for endorsements and recommendations.
- **e.** Flight instructor's responsibility in the conduct of the biennial flight review.

2. Action. The examiner will determine that the applicant's performance meets the objective by asking the applicant to describe flight instructor characteristics and responsibilities.

F. TASK: HUMAN FACTORS (G)

REFERENCE: AC 60-14.

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

- **a.** Control of human behavior.
- **b.** Development of student potential.
- **c.** Relationship of human needs to behavior and learning.
- **d.** Relationship of defense mechanisms to student learning.
- **e.** Relationship of defense mechanisms to pilot decision making.
- **f.** General rules which a flight instructor should follow during student training to ensure good human relations.

2. Action. The examiner will determine that the applicant's performance meets the objective by asking the applicant to describe human factors.

G. TASK: PLANNING INSTRUCTIONAL ACTIVITY (G)

REFERENCE: AC 60-14.

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

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

2. Action. The examiner will determine that the applicant's performance meets the objective by asking the applicant to describe the planning of instructional activity.

II. AREA OF OPERATION: *TECHNICAL SUBJECT AREAS*

NOTE: The examiner will select at least one TASK.

A. TASK: **AEROMEDICAL FACTORS** (G)

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

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

- **a.** Hypoxia, its symptoms, effects, and corrective action.
- **b.** Hyperventilation, its symptoms, effects, and corrective action.
- **c.** Middle ear and sinus problems, their causes, effects, and corrective action.
- **d.** Spatial disorientation, its causes, effects, and corrective action.
- **e.** Motion sickness, its causes, effects, and corrective action.
- **f.** The effects of dehydration, and their relationship to safety.
- **g.** The effects of alcohol and drugs, and their relationship to safety.
- **h.** Carbon monoxide poisoning, its symptoms, effects and corrective action.
- **i.** The effect of nitrogen excesses during scuba dives and how this affects a pilot during flight.

2. Action. The examiner will determine that the applicant's performance meets the objective by asking the applicant to describe aeromedical factors as this area of knowledge would be taught to a student.

B. TASK: VISUAL SCANNING AND COLLISION AVOIDANCE (G)

REFERENCES: AC 61-21, AC 61-23, AC 67-2, AC 90-48; AIM; Glider Handbooks or Manuals.

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

- **a.** Relationship between a pilot's physical or mental condition and vision.
- **b.** Various environmental conditions that degrade vision.
- **c.** Various optical illusions.
- **d.** "See and avoid" concept.
- **e.** Practice of "time sharing"' of attention inside and outside the cockpit.
- **f.** Relationship between poor visual scanning habits and increased collision risk.
- **g.** Proper clearing procedures.
- **h.** Importance of knowing aircraft blind spots.
- **I.** Relationship between aircraft speed differential and collision risk.
- **j.** Situations which involve the greatest collision risk.

2. Action. The examiner will determine that the applicant's performance meets the objective by asking the applicant to describe visual scanning and collision avoidance as this procedure would be taught to a student.

C. TASK: GLIDER AERODYNAMICS (G)

REFERENCES: AC 61-21, AC 61-23; Glider Handbook or Manual.

1. Objective. To determine that the applicant exhibits instructional knowledge of glider aerodynamics by describing:

- **a.** Glider and airfoil design characteristics.
- **b.** The three axes of rotation and stability about those axes.
- **e.** Lift/drag relationship.
- **d.** The forces acting on a glider in a straight flight.
- **e.** The forces acting on a glider in a turn.
- **f.** Stalls and spins.

2. Action. The examiner will determine that the applicant's performance meets the objective by asking the applicant to explain glider aerodynamics as this area of knowledge would be taught to a student.

D. TASK: ELEVATORS, AILERONS, AND RUDDER (G)

REFERENCES: AC 61-21, AC 61-23; Glider Handbook or Manual.

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

- **a.** Purpose of each primary control.
- **b.** Location, attachments, and system of control.
- **c.** Direction of movement relative to airflow.
- **d.** Effect on glider control.
- **e.** Proper technique for use.
- **f.** Adverse yaw.

2. Action. The examiner will determine that the applicant's performance meets the objective by asking the applicant to describe the elevators, ailerons, and rudder as this area of knowledge would be taught to a student.

E. TASK: TRIM DEVICES (G)

REFERENCES: AC 61-21, AC 61-23; Glider Handbook or Manual.

1. Objective. To determine that the applicant exhibits instructional knowledge of the elements related to trim devices by describing the:

- **a.** Purpose.
- **b.** Location, attachments, and system of control.
- **c.** Direction of movement relative to airflow and the primary control surface.
- **d.** Effect on glider control.
- **e.** Proper technique for use.

2. Action. The examiner will determine that the applicant's performance meets the objective by asking the applicant to describe the trim devices as this area of knowledge would be taught to a student.

F. TASK: HIGH-LIFT DEVICES (G)

REFERENCES: AC 61-21, AC 61-23; Glider Handbook or Manual.

1. Objective. To determine that the applicant exhibits instructional knowledge of the elements related to high-lift devices by describing the:

- **a.** Purpose.
- **b.** Various types.
- **c.** Location, attachments, and system of control.
- **d.** Effect on glider control.
- **e.** Effect on trim.
- **f.** Proper technique for use.

2. Action. The examiner will determine that the applicant's performance meets the objective by asking the applicant to describe the high-lift devices as this area of knowledge would be taught to a student.

G. TASK: HIGH-DRAG DEVICES (G)

REFERENCE: Glider Handbook or Manual.

1. Objective. To determine that the applicant exhibits instructional knowledge of the elements related to high-drag devices by describing the:

- **a.** Purpose.
- **b.** Various types.
- **c.** Location, attachments, and system of control.
- **d.** Effect on glider control.
- **e.** Effect on trim.
- **f.** Proper technique for use.

2. Action. The examiner will determine that the applicant'sperformance meets the objective by asking the applicant to describe the high-drag devices as this area of knowledge would be taught to a student.

H. TASK: GLIDER WEIGHT AND BALANCE (G)

REFERENCES: AC 61-21, AC 91-23; Glider Handbook or Manual.

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

a. Weight and balance terms.
b. The determination of total weight and center of gravity and the changes that occur when adding, removing, or shifting weight.
c. The effect of weight and balance on performance.
d. The purpose of ballast and the effect of ballast on performance.

2. Action. The examiner will determine that the applicant'sperformance meets the objective by asking the to describe glider weight and balance as this area of knowledge would be taught to a student.

I. TASK: FLIGHT PREPARATION AND PLANNING (G)

REFERENCES: AC 61-21, AC 61-23; Glider Handbook or Manual.

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

a. The selection and use of current and appropriate aeronautical charts.
b. The pertinent aspects of the National Airspace System, controlled and special-use airspace, the symbols used on aeronautical charts.
c. How to plot a course and select prominent en route checkpoints.
d. The use of pilotage and dead reckoning.
e. The construction of a flight profile to determine minimum flight altitude required at "go-ahead points".
f. Factors that should be considered in the selection of a suitable landing area in the event an off-field landing must be accomplished.

2. Action. The examiner will determine that the applicant's performance meets the objective by asking the applicant to describe flight preparation and planning as this area of knowledge would be taught to a student.

J. TASK: FEDERAL AVIATION REGULATIONS (G)

REFERENCES: FAR Parts 61 and 91; NTSB Part 830.

1. Objective. To determine that the applicant exhibits instructional knowledge of the elements related to Federal Aviation Regulations by describing:

a. Availability and method of revision.
b. FAR Part 61, including—

(1) purpose.
(2) general content.

c. FAR Part 91 including—

(1) purpose.
(2) general content.

d. NTSB Part 830, including—

(1) purpose.
(2) general content.

2. Action. The examiner will determine that the applicant's performance meets the objective by asking the applicant to discuss Federal Aviation Regulations.

K. TASK: PUBLICATIONS (G)

REFERENCES: AC 00-2, AC 61-21, AC 61-23; Glider Handbooks and Manuals.

1. Objective. To determine that the applicant exhibits instructional knowledge of the elements related to publications, advisory circulars, practical test standards, and glider handbooks and manuals by describing:

- **a.** Availability.
- **b.** Purpose.
- **c.** General content.

2. Action. The examiner will determine that the applicant's performance meets the objective by asking the applicant to describe publications as this area of knowledge would be taught to a student.

L. TASK: LOGBOOK ENTRIES AND CERTIFICATE ENDORSEMENTS (G)

REFERENCES: FAR Part 61; AC 61-21, AC 61-65.

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

- **a.** Required logbook entries for instruction given.
- **b.** Required student pilot certificate endorsements, including the appropriate logbook entries.
- **c.** Preparation of a recommendation for a pilot practical test, including the appropriate logbook entry.
- **d.** Required endorsement of a pilot logbook for the satisfactory completion of a biennial flight review.
- **e.** Required flight instructor records.

2. Action. The examiner will determine that the applicant's performance meets the objective by asking the applicant to discuss logbook entries and certificate endorsements.

III. AREA OF OPERATION: *PREFLIGHT PREPARATION*

NOTE: The examiner will select at least one TASK.

A. TASK: **CERTIFICATES AND DOCUMENTS** (G)

REFERENCES: FAR Parts 43, 61, and 91; AC 61- 21, AC 61-23; FAA-S-8081-1; Glider Handbook or Manual.

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

- **a.** Requirements for the issuance of pilot and flight instructor certificates and ratings, and the privileges and limitations of those certificates and ratings.
- **b.** Medical requirements for glider pilots.
- **c.** Airworthiness and registration certificates.
- **d.** Glider handbooks and manuals.
- **e.** Glider maintenance requirements and records.
- **f.** Equipment list.

2. Action. The examiner will determine that the applicant's performance meets the objective by asking the applicant to describe certificates and documents as this area of knowledge would be taught to a student.

B. TASK: **OBTAINING WEATHER INFORMATION** (G)

REFERENCES: AC 00-6, AC 00-45, AC 61-21, AC 61-23; FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

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

- **a.** A thorough weather check.
- **b.** Various means of obtaining weather information
- **c.** Weather reports, forecasts, and charts. including stability charts.
- **d.** Use of PIREPs, SIGMETs, AIRMETs, and Notices to Airmen.
- **e.** Recognition of aviation weather hazards.

f. Factors to be considered in making a “go/no-go” decision.

g. The relationship of the following factors to the lifting process—

(1) pressure and temperature lapse rates.
(2) atmospheric instability.
(3) thermal index.
(4) thermal production.
(5) cloud formation and identification.
(6) frontal weather.
(7) land and sea breezes.
(8) valley breezes.
(9) orographic lift.
(10) mountain waves.

2. Action. The examiner will determine that the applicant’s performance meets the objective by asking the applicant to describe the procedure for obtaining weather information as this area of knowledge would be taught to a student.

C. TASK: OPERATION OF SYSTEMS (G)

REFERENCES: AC 61-23; Glider Handbook or Manual.

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

a. Flight instruments, including—

(1) magnetic compass and its characteristics.
(2) inclinometer and yaw string.
(3) pitot-static system, including—

(a) airspeed indicator.
(b) altimeter and errors.
(c) variometer.
(d) total energy compensator.

(4) gyroscopic instruments, if applicable, including—

(a) turn coordinator.
(b) attitude indicator.

(5) electrical system, if installed.

(6) landing gear, including—

(a) retraction system and indicators, if applicable.
(b) wheels, brakes, and tires.

(7) oxygen, including—

(a) use.
(b) storage tank-supply and duration.
(c) pressure-reducing regulator.
(d) mask.
(e) type of oxygen.
(f) safety factors.

(8) avionics.

2. Action. The examiner will determine that the applicant's performance meets the objective by asking the applicant to explain the operation of systems as this area of knowledge would be taught to a student.

D. TASK: DETERMINING PERFORMANCE AND LIMITATIONS (G)

REFERENCE: Glider Handbook or Manual.

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

a. Proficient use of the appropriate performance charts, tables, and data.
b. Effect of density altitude and wind on performance.
c. Applicable performance speeds, and their uses.
d. Relationship between airspeeds and load factors.

2. Action. The examiner will determine that the applicant's performance meets the objective by asking the applicant to describe the procedure for determining performance and limitations as this area of knowledge would be taught to a student.

E. TASK: EQUIPMENT (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant exhibits instructional knowledge of equipment by describing items used for:

a. Flight at high altitudes.
b. Flight over long distances and varying terrain.
c. Flight in various climatic conditions.
d. Parachutes—

(1) preflight inspection.
(2) fitting.
(3) bailout procedures.

2. Action. The examiner will determine that the applicant's performance meets the objective by asking the applicant to explain the use of equipment, essential for flights in various conditions, as this area of knowledge would be taught to a student.

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

NOTE: The examiner will select a maneuver from Areas of Operation Vl through Xll. The examiner will ask the applicant to present a preflight lesson on the selected maneuver as the lesson would be taught to a student.

A. TASK: MANEUVER LESSON (G)

REFERENCES: AC 60-14. AC 61-23; FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

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

- **a.** Stating the purpose.
- **b.** Giving an accurate, comprehensive oral description, including the elements and common errors.
- **c.** Using instructional aids, as appropriate.
- **d.** Describing the recognition, analysis, and correction of common errors.

2. Action. The examiner will determine that the applicant's performance meets the objective by asking the applicant to present the selected maneuver as it would be taught to a student.

V. AREA OF OPERATION: *GROUND OPERATIONS*

NOTE: The examiner will select at least one TASK.

A. TASK: **ASSEMBLY** (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to assembly by describing the—

(1) selection of a suitable area and sufficient crewmembers for assembly.
(2) importance of following a checklist.
(3) use of proper tools.
(4) proper handling of components.
(5) cleaning and lubricating of parts, as appropriate.
(6) importance of accounting for all tools and parts at the completion of assembly.
(7) post-assembly inspection, including a positive control check.

b. Exhibits instructional knowledge of common errors related to assembly by describing—

(1) poor planning with regard to the selection of a suitable area or the procurement of a sufficient number of crewmembers.
(2) failure to use the checklist.
(3) hazards of allowing distractions to interrupt assembly.
(4) the careless handling of glider components.
(5) the omission, or careless performance of, a post-assembly inspection, including a positive control check.
(6) hazards of attempting assembly in an area exposed to wind.

c. Demonstrates and simultaneously explains assembly from an instructional standpoint.
d. Analyzes and corrects common errors related to assembly.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe assembly as this area of skill would be taught to a student.
b. Selecting common errors related to assembly, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and simultaneously explain assembly.
d. Simulating common errors related to assembly, and evaluating the applicant's ability to analyze and correct those errors.

B. TASK: GROUND HANDLING (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to ground handling by describing the—

(1) selection and use of the proper ground handling equipment for the existing conditions.
(2) proper positioning and securing of controls.
(3) precautions to be taken with regard to the canopy.
(4) proper positioning and the use of a sufficient number of crewmembers.
(5) importance of assuring that placards or cautions are observed when handling glider structure.
(6) importance of being constantly aware of obstructions or other hazards.
(7) importance of following a suitable route at an appropriate (slow) speed.

b. Exhibits instructional knowledge of common errors related to ground handling by describing—

(1) failure to select and use proper ground handling equipment.
(2) failure to secure, or the improper securing, of controls.
(3) failure to secure canopy(ies).
(4) hazards of attempting to move the glider with an insufficient number of crewmembers.
(5) failure to follow directions stated in placards.

(6) careless movement of the glider near obstructions.
(7) poor choice of route for ground movement.
(8) movement of the glider at too fast a speed.

c. Demonstrates and simultaneously explains ground handling from an instructional standpoint.
d. Analyzes and corrects common errors related to ground handling.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe ground handling as this operation would be taught to a student.
b. Selecting common errors related ground handling, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and simultaneously explain ground handling.
d. Simulating common errors related to ground handling, and evaluating the applicant's ability to analyze and correct those errors.

C. TASK: VISUAL INSPECTION (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to a visual inspection as appropriate to the glider used for the practical test, by describing—

(1) reasons for the visual inspection.
(2) the importance of following the appropriate checklist.
(3) inspection of personal equipment.
(4) inspection of the oxygen system, including supply and proper operation.
(5) the check of the condition and operation of flight controls.
(6) the detection of visible structural damage.
(7) the determination that glider components are properly assembled and attachments are secure.
(8) removal of tie-downs, control locks, and wheel chocks.
(9) ice and frost removal.

(10) ballast management including c.g. weights and water ballast.

(11) inspection of launch equipment, including tow hitches and releases, towline, and weak links.

(12) the importance of properly loading and securing baggage and equipment.

(13) the use of sound judgment in determining whether the glider is in condition for safe flight.

b. Exhibits instructional knowledge of common errors related to a visual inspection by describing—

(1) improper use of the checklist.

(2) hazards of attempting to perform a visual inspection from memory.

(3) hazards which may result from allowing distractions to interrupt a visual inspection.

(4) inability to recognize discrepancies.

c. Demonstrates and simultaneously explains a visual inspection from an instructional standpoint.

d. Analyzes and corrects common errors related to a visual inspection.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe a visual inspection as this procedure would be taught to a student.

b. Selecting common errors related to a visual inspection, and asking the applicant to explain the recognition and correction of those errors.

c. Asking the applicant to demonstrate and simultaneously explain a visual inspection.

d. Simulating common errors related to a visual inspection, and evaluating the applicant's ability to analyze and correct those errors.

D. TASK: PRE-TAKEOFF CHECK (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to pre-takeoff check by describing the—

(1) reason for performing each checklist item.
(2) establishment, with crewmembers, of a proper course of action, including signals, speeds, and emergency procedures.
(3) proper altimeter setting procedure.
(4) proper security of cockpit items.
(5) proper adjustment of the seat or rudder pedals, and the fastening and adjustment of safety belts and shoulder harnesses.
(6) proper procedure for checking and adjusting controls.
(7) proper procedure for closing and securing the canopy.
(8) proper procedure for towline hookup.
(9) proper check of the towline release mechanism.
(10) use of the appropriate hitch for the type of launch to be conducted.
(11) how to estimate wind speed and direction.
(12) importance of reviewing takeoff emergency procedures.
(13) importance of assuring that the takeoff area is free of conflicting traffic.

b. Exhibits instructional knowledge of common errors related to the pre-takeoff check by describing—

(1) omission or improper accomplishment of essential items.
(2) failure to use proper visual signals.
(3) failure to check or properly adjust controls.
(4) failure to follow the proper procedure for towline hookup.
(5) failure to test the towline release mechanism.
(6) faulty estimate of wind speed and direction.
(7) hazards of failure to review takeoff emergency procedures.

c. Demonstrates and simultaneously explains the pre-takeoff check from an instructional standpoint.

d. Analyzes and corrects common errors related to the pre-takeoff check.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe the pre-takeoff check as this procedure would be taught to a student.
b. Selecting common errors related to the pre-takeoff check, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and simultaneously explain the pre-takeoff check.
d. Simulating common errors related to the pre-takeoff check, and evaluating the applicant's ability to analyze and correct those errors.

VI. AREA OF OPERATION: *AERO TOW LAUNCH*

NOTE: The examiner will select at least one TASK.

A. TASK: **VISUAL SIGNALS** (G)

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

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to visual signals by describing the—

(1) pre-launch signals, including the purpose of and proper response to each.
(2) launch signals, including the purpose of and proper response to each.
(3) airborne signals, including the purpose of and proper response to each.
(4) emergency signals, including the purpose of and proper response to each.

b. Exhibits instructional knowledge of common errors related to visual signals by describing the—

(1) improper transmission of pre-launch signals to ground crewmembers.
(2) improper transmission of launch signals to ground crewmembers.
(3) improper response to launch signals.
(4) improper transmission of airborne signals to the tow pilot.
(5) improper response to airborne signals from the tow pilot.
(6) improper transmission of, or response to, airborne emergency signals.

c. Demonstrates and simultaneously explains visual signals from an instructional standpoint.
d. Analyzes and corrects common errors related to visual signals.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe visual signals as this area of knowledge would be taught to a student.
b. Selecting common errors related to visual signals, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and simultaneously explain visual signals.
d. Simulating common errors related to visual signals, and evaluating the applicant's ability to analyze and correct those errors.

B. TASK: NORMAL AND CROSSWIND TAKEOFFS (G)

REFERENCES: FAA-S-8081-1, FAA-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to normal and crosswind takeoffs by describing—

(1) how to determine or estimate wind speed and direction.
(2) glider configuration.
(3) proper glider positioning and towline hookup.
(4) initial positioning of controls.
(5) takeoff hazards, particularly those related to obstructions.
(6) use of proper pre-launch and launch visual signals.
(7) directional control during the takeoff roll.
(8) proper technique in a crosswind.
(9) lift-off attitude.
(10) maintenance of alignment with the towplane.
(11) proper climbout technique.

b. Exhibits instructional knowledge of common errors related to normal and crosswind takeoffs by describing—

(1) improper glider configuration.
(2) improper initial positioning of flight controls.
(3) the use of improper visual signals.
(4) failure to maintain alignment behind the towplane, before towplane becomes airborne.

(5) improper position relative to the towplane during liftoff.
(6) improper glider position, in crosswind, after towplane becomes airborne.

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

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe normal and crosswind takeoffs as this area of skill would be taught to a student.
b. Selecting common errors related to normal and crosswind takeoffs, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and simultaneously explain a normal or crosswind takeoff.
d. Simulating common errors related to a normal or crosswind takeoff, and evaluating the applicant's ability to analyze and correct those errors.

C. TASK: ESTABLISHMENT AND MAINTENANCE OF TOW POSITIONS (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to the establishment and maintenance of tow positions by describing—

(1) high tow, including purpose, recognition, and control technique.
(2) low tow, including purpose, recognition, and control technique.
(3) wake turbulence associated with the towplane.
(4) proper technique for transitioning between high-tow and low-tow positions.
(5) proper technique for performing turns on tow.
(6) over-control and under-control while on tow.

b. Exhibits instructional knowledge of common errors related to the establishment and maintenance of tow positions by describing—

(1) faulty technique with regard to proper vertical and lateral positions during high tow.
(2) faulty technique with regard to proper vertical and lateral positions during low tow.
(3) faulty technique during transition between high and low tow.
(4) inadvertent entry into towplane wake turbulence.
(5) the initiation of a turn too early or at an angle of bank greater than the towplane's.
(6) the initiation of a turn too late or at an angle of bank less than the towplane's.

c. Demonstrates and simultaneously explains the establishment and maintenance of tow positions from an instructional standpoint.
d. Analyzes and corrects common errors related to the establishment and maintenance of tow positions.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe the establishment and maintenance of tow positions as this area of skill would be taught to a student.
b. Selecting common errors related to the establishment and maintenance of tow positions, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and simultaneously explain the establishment and maintenance of tow positions.
d. Simulating common errors related to the establishment and maintenance of tow positions, and evaluating the applicant's ability to analyze and correct those errors.

D. TASK: SLACK LINE (G)

REFERENCES: FAA-S-8081-l, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to slack line by describing—

(1) situations that lead to the development of slack line.
(2) the hazards of slack line.
(3) techniques which can be used to correct slack line in various situations.

b. Exhibits instructional knowledge of common errors related to slack line by describing—

(1) failure to take corrective action at the first indication of slack line development.
(2) the use of an improper technique to correct slack line.
(3) a faulty corrective technique which can result in excessive stress on the towline, weak link, and glider structure.

c. Demonstrates and simultaneously explains slack line from an instructional standpoint.
d. Analyzes and corrects common errors related to slack line.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe slack line as this area of skill would be taught to a student.
b. Selecting common errors related to slack line, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and simultaneously explain slack line.
d. Simulating common errors related to slack line, and evaluating the applicant's ability to analyze and correct those errors.

E. TASK: **BOXING THE WAKE** (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to boxing the wake by describing the—

(1) performance of a rectangular pattern that keeps the glider slightly outside the wake.
(2) proper control technique and coordination.
(3) importance of maintaining a taut towline.

b. Exhibits instructional knowledge of common errors related to boxing the wake by describing—

(1) flight into the wake turbulence.
(2) faulty control technique and coordination.
(3) abrupt or rapid changes of position.
(4) the performance of an excessively large rectangle (moving too far from the wake).
(5) the hazards of allowing a slack line to develop.

c. Demonstrates and simultaneously explains boxing the wake from an instructional standpoint.
d. Analyzes and corrects common errors related to boxing the wake.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe normal boxing the wake as this area of skill would be taught to a student.
b. Selecting common errors related to boxing the wake, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and simultaneously explain boxing the wake.
d. Simulating common errors related to boxing the wake, and evaluating the applicant's ability to analyze and correct those errors.

F. TASK: TOW RELEASE (G)

REFERENCES: FAA-S-8081-1 FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to tow release by describing

(1) why release should be accomplished when towline tension is normal.
(2) the advisability of assuring that the area is clear of other aircraft prior to release.
(3) the clearing turn which should be made by the glider and the towplane immediately after release.
(4) when an immediate release should be accomplished if the glider pilot loses sight of the towplane.

b. Exhibits instructional knowledge of common errors related to tow release by describing—

(1) failure to clear area prior to release.
(2) release when in close proximity to aircraft other than the towplane.
(3) failure to make proper turn after release.

c. Demonstrates and simultaneously explains tow release from an instructional standpoint.
d. Analyzes and corrects common errors related to tow release.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe tow release as this area of skill would be taught to a student.
b. Selecting common errors related to tow release, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and simultaneously explain tow release.
d. Simulating common errors related to tow release, and evaluating the applicant's ability to analyze and correct those errors.

G. TASK: AERO TOW ABNORMAL OCCURRENCES (G)

NOTE: The applicant's competence with regard to aero tow abnormal occurrences will be evaluated through oral questioning.

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

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

a. Why the glider pilot and towplane pilot should agree on a course of action prior to flight.
b. Proper glider pilot response in the event of—

(1) towplane power loss during takeoff.
(2) towline break.
(3) towplane power failure at altitude.
(4) glider release failure.
(5) towplane release failure.
(6) glider and towplane release failure.

2. Action. The examiner will determine that the applicant's performance meets the objective by asking the applicant to explain aero tow abnormal occurrences as this area of knowledge would he taught to a student.

VII. AREA OF OPERATION: *GROUND TOW LAUNCH (AUTO OR WINCH)*

NOTE: The examiner will select at least one TASK.

A. TASK: VISUAL SIGNALS (G)

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

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to visual signals by describing the—

(1) pre-launch signals, including the purpose of and proper response to each.
(2) launch signals, including the purpose of and proper response to each.
(3) airborne signals, including the purpose of and proper response to each.
(4) emergency signals, including the purpose of and proper response to each.

b. Exhibits instructional knowledge of common errors related to visual signals by describing the—

(1) improper transmission of pre-launch signals to ground crewmembers.
(2) improper transmission of launch signals to ground crewmembers.
(3) improper response to launch signals.
(4) improper transmission of airborne signals to the ground crewmembers.
(5) improper response to signals from the ground crewmembers while airborne.
(6) improper transmission of, or response to, emergency signals while airborne.

c. Demonstrates and simultaneously explains visual signals from an instructional standpoint.
d. Analyzes and corrects common errors related to visual signals.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe visual signals as this area of knowledge would be taught to a student.
b. Selecting common errors related to visual signals, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and simultaneously explain visual signals.
d. Simulating common errors related to visual signals and evaluating the applicant's ability to analyze and correct those errors.

B. TASK: NORMAL AND CROSSWIND TAKEOFFS (G)

REFERENCES: FAA-S-8081-1 FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to normal and crosswind takeoffs by describing—

(1) how to determine or estimate wind speed and direction.
(2) proper calculation of launch airspeed.
(3) glider configuration.
(4) proper glider positioning and towline hookup.
(5) initial positioning of the controls.
(6) takeoff hazards including those related to obstructions and exceeding maximum launch airspeed.
(7) use of proper pre-launch and launch visual signals.
(8) directional control during the takeoff roll
(9) proper technique in a crosswind.
(10) the attainment of appropriate pitch attitude during the ground roll.
(11) lift-off technique.
(12) climb pitch attitude and track during the climb.
(13) proper technique for making airspeed adjustments.
(14) proper towline release technique.

b. Exhibits instructional knowledge of common errors related to normal and crosswind takeoffs by describing

(1) improper glider configuration.
(2) improper initial positioning of flight controls.
(3) the use of improper visual signals.

(4) improper crosswind correction.
(5) improper lift-off technique.
(6) improper climb profile.
(7) faulty corrective action for the adjustment of airspeed.
(8) exceeding maximum launch airspeed.
(9) faulty corrective action for porpoising.
(10) improper towline release technique and timing.

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

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe normal and crosswind takeoffs as this area of skill would be taught to a student.
b. Selecting common errors related to normal and crosswind takeoffs, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and simultaneously explain a normal or crosswind takeoff.
d. Simulating common errors related to a normal or crosswind takeoff, and evaluating the applicant's ability to analyze and correct those errors.

C. TASK: GROUND TOW LAUNCH ABNORMAL OCCURRENCES (G)

NOTE: The applicant' s competence with regard to ground launch abnormal occurrences will be evaluated through oral questioning.

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

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

a. Why the glider pilot and ground crew should agree on a course of action prior to launch.
b. Proper glider pilot response in the event of

(1) overrunning the towline.
(2) launch power failure or towline break when the glider is—

(a) below 200 feet.
(b) above 200 feet.

(3) inability to release towline.
(4) porpoising.

c. Methods for the emergency release or severance of towline.

2. Action. The examiner will determine that the applicant's performance meets the objective by asking the applicant to describe ground launch abnormal occurrences as this area of knowledge would be taught to the student.

VIII. AREA OF OPERATION: *POWERED GLIDER SELF-LAUNCH*

NOTE: The examiner will select at least one TASK.

A. TASK: DETERMINING PERFORMANCE AND LIMITATIONS (G)

REFERENCES: AC 61-94; FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

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

- **a.** Use of appropriate charts, tables, and data.
- **b.** Computation of fuel requirements.
- **c.** Determination that weight and center of gravity will be within limits during all phases of flight.
- **d.** Effect of density altitude, wind, terrain, and other conditions.
- **e.** Effect of seasonal and atmospheric conditions on the powered glider's performance.
- **f.** Applicable performance speeds and their uses.
- **g.** Determination that required performance is within the powered glider's capability and operating limitations.

2. Action. The examiner will determine that the applicant's performance meets the objective by asking the applicant to describe the procedure for determining performance and limitations as this area of knowledge would be taught to a student.

B. TASK: VISUAL INSPECTION (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

- **a.** Exhibits instructional knowledge of the elements of a visual inspection (as appropriate to the powered glider used for the practical test) by describing—
  - **(1)** reasons for the visual inspection, items that should be inspected, and how defects are detected.
  - **(2)** importance of following the appropriate checklist.

(3) how to determine fuel and oil quantity.
(4) importance of proper grade fuel.
(5) fuel contamination.
(6) detection of fuel, oil, and hydraulic leaks.
(7) inspection of the oxygen system, including supply and proper operation.
(8) the determination that all components are properly assembled and the attachments are secure.
(9) inspection of the flight controls, including a positive control check.
(10) detection of visible structural damage, including exhaust system.
(11) removal of the tie-downs, control locks, and wheel chocks.
(12) removal of ice and frost.
(13) importance of the proper loading and securing of baggage and equipment.
(14) the determination that the powered glider is in condition for safe flight.

b. Exhibits instructional knowledge of common errors related to a visual inspection by describing—

(1) improper use of the checklist.
(2) hazards which may result from allowing distractions to interrupt a visual inspection.
(3) inability to recognize discrepancies.
(4) hazards of attempting to perform a visual inspection from memory.
(5) failure to assure servicing with the proper fuel.

c. Demonstrates and simultaneously explains a visual inspection from an instructional standpoint.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe a visual inspection as this procedure would be taught to a student.
b. Selecting common errors related to a visual inspection, and asking the applicant to explain those errors.
c. Asking the applicant to demonstrate and simultaneously explain a visual inspection.

C. TASK: ENGINE STARTING (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements of engine starting by describing—

(1) safety precautions related to engine starting.
(2) hand-propping technique.
(3) the effect of atmospheric conditions on engine starting.
(4) the importance of following the appropriate checklist.
(5) the proper adjustment of engine controls.
(6) the prevention of powered glider movement during and after engine start.
(7) the avoidance of excessive RPM and temperatures.
(8) the importance of checking engine instruments after engine start.

b. Exhibits instructional knowledge of common errors related to engine starting by describing—

(1) faulty hand-propping procedure and technique.
(2) attempting to perform the starting procedure from memory.
(3) excessively high RPM after starting.
(4) failure to assure proper clearance of the propeller.

c. Demonstrates and simultaneously explains engine starting from an instructional standpoint.
d. Analyzes and corrects common errors related to engine starting.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe engine starting as his procedure would be taught to a student.
b. Selecting common errors related to engine starting, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and imultaneously explain engine starting.

d. Simulating common errors related to engine starting, nd evaluating the applicant's ability to analyze and correct those errors.

D. TASK: TAXIING (G)

REFERENCE: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to powered glider taxiing by describing—

(1) proper brake check and correct use of brakes.
(2) the compliance with airport surface marking, signals, and clearances.
(3) how to control direction and speed.
(4) control positioning for various wind conditions.
(5) techniques to avoid other aircraft and hazards, considering wingspan and maneuvering space required.
(6) the application of right-of-way rules.

b. Exhibits instructional knowledge of the common errors related to powered glider taxiing by describing—

(1) improper use of brakes.
(2) improper positioning of flight controls for various wind conditions.
(3) the hazards of taxiing too fast.
(4) failure to comply with markings, signals, or clearances.
(5) improper positioning for runup.

c. Demonstrates and simultaneously explains powered glider taxiing from an instructional standpoint.
d. Analyzes and corrects common errors related to powered glider taxiing.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe powered glider taxiing as this area of skill would be taught to a student.
b. Selecting common errors related to powered glider taxiing, and asking the applicant to explain the recognition and correction of those errors.

c. Asking the applicant to demonstrate and simultaneously explain powered glider taxiing.
d. Simulating common errors related to powered glider taxiing, and evaluating the applicant's ability to analyze and correct those errors.

E. TASK: PRE-TAKEOFF CHECK (G)

REFERENCES: FAA- 8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of pre-takeoff check by describing—

(1) powered glider positioning to avoid creating hazards.
(2) division of attention inside and outside the cockpit.
(3) the importance of following the checklist and responding to each checklist item.
(4) the reasons for ensuring proper engine temperatures and pressures for runup and takeoff.
(5) the method used to determine that the powered glider is in a safe operating condition.
(6) the method used to determine takeoff performance airspeeds and takeoff distances.
(7) emergency procedures.
(8) methods for assuring that the takeoff area is free of hazards.
(9) methods of assuring adequate clearance from other traffic.

b. Exhibits instructional knowledge of common errors related to the pre-takeoff check by describing—

(1) failure to use or the improper use of the checklist.
(2) improper positioning of the powered glider.
(3) acceptance of "out-of-limits" or questionable engine performance.
(4) an improper check of flight controls.
(5) the hazards of failure to review takeoff and emergency procedures.
(6) failure to check for hazards and other traffic.

c. Demonstrates and simultaneously explains a pre-takeoff check from an instructional standpoint.
d. Analyzes and corrects common errors related to a pre-takeoff check.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe a pre-takeoff check as this procedure would be taught to a student.
b. Selecting common errors related to a pre-takeoff check, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and simultaneously explain a pre-takeoff check.
d. Simulating common errors related to a pre-takeoff check, and evaluating the applicant's ability to analyze and correct those errors.

F. TASK: TAKEOFF AND CLIMB (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to a takeoff and climb by describing—

(1) how to determine or estimate wind speed and direction.
(2) how to determine takeoff and climb performance.
(3) the importance of noting obstructions or other hazards in the takeoff path.
(4) alignment with takeoff path.
(5) initial positioning of flight controls.
(6) power application.
(7) directional control.
(8) crosswind technique during ground run.
(9) lift-off attitude and airspeed.
(10) climb attitude, power setting, and airspeed.
(11) crosswind correction and track during climb.
(12) use of the checklist.

b. Exhibits instructional knowledge of common errors related to a takeoff and climb by describing—

(1) improper use of takeoff and climb performance data.
(2) improper configuration.
(3) improper power application.
(4) inappropriate removal of the hand from the throttle.
(5) poor directional control.

(6) improper use of aileron.
(7) improper pitch attitude during lift-off.
(8) failure to establish and maintain proper climb attitude and airspeed.
(9) drift during climb.

e. Demonstrates and simultaneously explains a takeoff and climb from an instructional standpoint.
d. Analyzes and corrects common errors related to a takeoff and climb.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe a takeoff and climb as this area of skill would be taught to a student.
b. Selecting common errors related to a takeoff and climb, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and simultaneously explain a takeoff and climb.
d. Simulating common errors related to a takeoff and climb, and evaluating the applicant's ability to analyze and correct those errors.

G. TASK: ENGINE SHUTDOWN IN FLIGHT (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to engine shutdown in flight by describing the—

(1) establishment of the manufacturer's recommended power setting to ensure engine cooling prior to shutdown.
(2) establishment of the appropriate airspeed.
(3) the shutdown of unnecessary electrical equipment, if appropriate.
(4) manufacturer's recommended propeller feathering procedure, and/or propeller positioning and stowing procedure.
(5) selection of proper static source, if appropriate.

b. Exhibits instructional knowledge of common errors related to engine shutdown in flight by describing the—

(1) failure to set engine at idle for the specified period of time.
(2) initiation of feathering procedure at an inappropriate airspeed.
(3) failure to follow the manufacturer's recommended propeller feathering, positioning, and/or stowing procedure.
(4) improper setting of electrical equipment.
(5) failure to maintain positive aircraft control while performing engine shutdown procedures.

c. Demonstrates and simultaneously explains engine shutdown in flight from an instructional standpoint.
d. Analyzes and corrects common errors related to engine shutdown in flight.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe engine shutdown in flight as this procedure would be taught to a student.
b. Selecting common errors related to engine shutdown in flight, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and simultaneously explain engine shutdown in flight.
d. Simulating common errors related to engine shutdown in flight, and evaluating the applicant's ability to analyze and correct those errors.

H. TASK: ENGINE RESTART IN FLIGHT (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to engine restart in flight by describing the—

(1) establishment of the proper airspeed.
(2) manufacturer's propeller repositioning procedure.
(3) manufacturer's propeller unfeathering procedure.
(4) operation of engine controls.

(5) procedure for starting engine by starter or by windmilling.
(6) proper engine warmup procedure.
(7) selection of proper static source, if appropriate.
(8) proper setting of electrical equipment.
(9) proper adjustment of propeller pitch.

b. Exhibits instructional knowledge of common errors related to engine restart in flight by describing the—

(1) failure to establish recommended airspeed.
(2) performance of a faulty propeller unfeathering or repositioning procedure.
(3) failure to properly operate engine controls.
(4) failure to follow the prescribed procedure for starting engine by starter.
(5) failure to follow the prescribed procedure for starting by windmilling.
(6) improper procedure for warmup.
(7) inappropriate setting of electrical equipment.
(8) failure to maintain positive aircraft control while performing engine restart procedures.

e. Demonstrates and simultaneously explains engine restart in flight from an instructional standpoint.
d. Analyzes and corrects common errors related to engine restart in flight.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe engine restart in flight as this procedure would be taught to a student.
b. Selecting common errors related to engine restart in flight, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and simultaneously explain engine restart in flight.
d. Simulating common errors related to engine restart in flight, and evaluating the applicant's ability to analyze and correct those errors.

I. TASK: ABNORMAL OCCURRENCES (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

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

a. Partial or complete power failure or failure to gain restart.
b. Smoke or fire during ground or flight operations.
c. Loss of engine oil pressure.
d. Low fuel pressure.
e. Engine overheat.
f. Electrical system malfunction.
g. Canopy opening in flight.
h. Emergency descent.
i. Off-field landing.

2. Action. The examiner will determine that the applicant's performance meets the objective by asking the applicant to describe abnormal occurrences as this area of knowledge would be taught to a student.

J. TASK: APPROACH AND LANDING WITH POWER (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to an approach and landing with power by describing—

(1) landing performance and limitations.
(2) configuration and power.
(3) obstruction and other hazards which should be considered.
(4) a stabilized approach to the selected touch-down area, at the recommended airspeed.
(5) coordination of flight controls.
(6) a precise ground track.
(7) wind shear and turbulence.
(8) proper use of spoilers, dive brakes, or flaps.
(9) crosswind technique.

(10) timing, judgment, and control touch during roundout and touchdown.
(11) directional control after touchdown.
(12) use of the checklist.

b. Exhibits instructional knowledge of common errors related to approaches and landings with power by describing—

(1) improper use of landing performance data and limitations.
(2) failure to establish approach and landing configuration at proper time or in proper sequence.
(3) rough or erratic use of power.
(4) failure to establish and maintain a stabilized approach.
(5) failure to use proper technique for wind shear or turbulence.
(6) poor judgment or technique in the use of spoilers, dive brakes, or flaps.
(7) improper crosswind technique.
(8) aulty technique during roundout and touchdown.
(9) oor directional control after touchdown.
(10) improper use of brakes.

c. Demonstrates and simultaneously explains an approach and landing with power from an instructional standpoint.
d. Analyzes and corrects common errors related to approaches and landings with power.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe an approach and landing with power as this area of skill would be taught to a student.
b. Selecting common errors related to approaches and landings with power, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and simultaneously explain an approach and landing with power.
d. Simulating common errors related to approaches and landings with power, and evaluating the applicant's ability to analyze and correct those errors.

IX. AREA OF OPERATION: *IN-FLIGHT MANEUVERS*

NOTE: The examiner will select TASK E and one other TASK.

A. TASK: **STRAIGHT GLIDES** (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual!.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to straight glides by describing the—

(1) pitch attitude and airspeed.
(2) establishment and maintenance of a precise ground track.
(3) effect of dive brakes, spoilers, and flaps, if the glider is so equipped.
(4) use of smooth and coordinated control applications.
(5) use of trim.

b. Exhibits instructional knowledge of common errors related to straight glides by describing the—

(1) rough or erratic pitch attitude and airspeed control.
(2) failure to establish and maintain proper wind drift correction.
(3) effect of improper control technique when using dive brakes, spoilers, or flaps.
(4) rough, uncoordinated, or inappropriate control applications.
(5) failure to trim or the improper use of trim.

c. Demonstrates and simultaneously explains straight glides from an instructional standpoint.
d. Analyzes and corrects common errors related to straight glides.

[1]**2. Action.** The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe straight glides as this maneuver would be taught to a student.

b. Selecting common errors related to straight glides, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and simultaneously explain straight glides.
d. Simulating common errors related to straight glides, and evaluating the applicant's ability to analyze and correct those errors.

B. TASK: TURNS TO HEADINGS (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to turns to headings by describing the—

(1) proper pitch attitude, bank attitude. and airspeed.
(2) roll-in and roll-out technique.
(3) changes in lift, drag, and load factor.
(4) adverse yaw.
(5) maintenance of a specified airspeed.
(6) use of smooth and coordinated control applications.

b. Exhibits instructional knowledge of common errors related to turns to headings by describing—

(1) failure to properly clear area prior to turn entry.
(2) rough or uncoordinated control technique during roll-in and roll-out.
(3) failure to establish desired degree of bank.
(4) lack of precision in the completion of a turn to a heading.

c. Demonstrates and simultaneously explains turns to headings from an instructional standpoint.
d. Analyzes and corrects common errors related to turns to headings.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe turns to headings as this area of skill would be taught to a student.

b. Selecting common errors related to turns to headings, and asking the applicant to explain the recognition and correction of those errors.

c. Asking the applicant to demonstrate and simultaneously explain turns to headings.

d. Simulating common errors related to turns to headings, and evaluating the applicant's ability to analyze and correct those errors.

C. TASK: MANEUVERING AT CRITICALLY SLOW AIRSPEED (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to maneuvering at critically slow airspeed by describing—

(1) establishment and maintenance.
(2) flight characteristics.
(3) controllability.
(4) the importance of maintaining an appropriate airspeed in turbulent air or as bank is increased.
(5) the importance of smooth, coordinated control applications.
(6) the proper technique for avoiding a stall when raising a lowered wing.
(7) recovery to desired airspeed.

b. Exhibits instructional knowledge of common errors related to maneuvering at critically slow airspeed by describing—

(1) failure to establish or to maintain critically slow airspeed.
(2) improper trim technique.
(3) rough or uncoordinated control technique.
(4) lack of pilot recognition of the first indications of a stall.
(5) failure to use proper technique to avoid a stall in turbulent air or during a turn.
(6) faulty technique when raising a lowered wing.

c. Demonstrates and simultaneously explains maneuvering at critically slow airspeed from an instructional standpoint.

d. Analyzes and corrects common errors related to maneuvering at critically slow airspeed.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe maneuvering at critically slow airspeed as this area of skill would be taught to a student.
b. Selecting common errors related to maneuvering at critically slow airspeed, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and simultaneously explain maneuvering at critically slow airspeed.
d. Simulating common errors related to maneuvering at critically slow airspeed, and evaluating the applicant's ability to analyze and correct those errors.

D. TASK: STALL RECOGNITION AND RECOVERY (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to imminent and full stall recognition and recovery by describing—

(1) aerodynamics of a stall.
(2) how to recognize imminent and full stalls.
(3) the effect of such factors as weight, center of gravity, load factor, spoilers, dive brakes, flaps, bank angle, and poor coordination.
(4) flight situations where unintentional imminent or full stalls may occur.
(5) the performance of Intentional imminent and full stalls in various configurations.
(6) entry technique and minimum entry altitude for intentional stalls.
(7) proper coordination of flight controls.
(8) proper recovery technique and minimum recovery altitude.

b. Exhibits instructional knowledge of common errors related to imminent and full stalls by describing—

(1) failure to properly establish the specified configuration.
(2) improper pitch, heading, and/or bank control during straight-ahead stalls.
(3) improper pitch and or bank control during turning stalls.
(4) rough and/or uncoordinated control technique.
(5) failure to achieve a full stall when a full stall is specified.
(6) poor stall recognition and delayed recovery.
(7) excessive altitude loss and/or excessive speed during recovery.
(8) secondary stall during recovery.

c. Demonstrates and simultaneously explains stall recognition and recovery from an instructional standpoint.
d. Analyzes and corrects common errors related to stall recognition and recovery.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe stall recognition and recovery as this maneuver would be taught to a student.
b. Selecting common errors related to stall recognition and recovery, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and simultaneously explain stall recognition and recovery.
d. Simulating common errors related to stall recognition and recovery, and evaluating the applicant's ability to analyze and correct those errors.

E. TASK: SPINS (G)

NOTE: INTENTIONAL SPINNING OF A GLIDER FOR WHICH THE SPIN MANEUVER IS NOT SPECIFICALLY APPROVED IS NOT AUTHORIZED. At the discretion of the examiner conducting the test, a logbook record attesting to the spin competency of the applicant may be accepted in lieu of the demonstration. A logbook record shall be certified by the flight instructor who conducted the spin instruction.

REFERENCES: Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to spins by describing—

(1) the aerodynamics of spins.
(2) the effect of various factors such as configuration, weight, center of gravity, and control coordination.
(3) flight situations where unintentional spins may occur.
(4) how to recognize indications leading to spins.
(5) control technique to maintain a stabilized spin.
(6) orientation during a spin.
(7) the manufacturer's recommended recovery technique.
(8) minimum recovery altitude for intentional spins.
(9) anxiety factors associated with spin instruction.

b. Exhibits instructional knowledge of common errors related to spins by describing—

(1) failure to properly establish proper configuration prior to spin entry.
(2) failure to achieve and maintain a full stall during spin entry.
(3) failure to recognize the indications leading to a spin.
(4) improper use of flight controls during spin entry, rotation, or recovery.
(5) disorientation during a spin.
(6) failure to distinguish between a spiral and a spin.
(7) excessive speed or accelerated stall during recovery.
(8) failure to recover with minimum loss of altitude.
(9) hazards of attempting to spin a glider not approved for spins.

1. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe a spin as this area of skill would be taught to a student.
b. Selecting common errors related to spins, and asking the applicant to explain how to recognize and correct those errors.
c. Asking the applicant to demonstrate and simultaneously explain a spin.*
d. Simulating selected common errors related to spins, and evaluating the applicant's ability to analyze and correct those errors. *

F. TASK: RECOVERY FROM UNUSUAL ATTITUDES (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to recovery from unusual attitudes by describing—

(1) conditions and situations that may result in unintentional high-speed spirals.
(2) the recognition of the imminent development of an unintentional high-speed spiral.
(3) the control technique for recovery from an unintentional high-speed spiral.
(4) conditions and situations that may result in excessive bank and pitch attitudes and the proper control technique for recovery from those attitudes.
(5) conditions and situations that may result in high-sink rates and the proper control technique for recovery.

b. Exhibits instructional knowledge of common errors related to recovery from unusual attitudes by describing—

(1) failure to recognize when an unusual attitude is imminent.
(2) rough, abrupt, and/or uncoordinated control applications.
(3) the improper sequence of control applications.

c. Demonstrates and simultaneously explains recovery from unusual attitudes from an instructional standpoint.

d. Analyzes and corrects common errors related to recovery from unusual attitudes.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe recovery from unusual attitudes as this area of skill would be taught to a student.

b. Selecting common errors related to recovery from unusual attitudes, and asking the applicant to explain the recognition and correction of those errors.

c. Asking the applicant to demonstrate and simultaneously explain recovery from unusual attitudes.

d. Simulating common errors related to recovery from unusual attitudes, and evaluating the applicant's ability to analyze and correct those errors.

G. TASK: **STEEP TURNS** (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to steep turns by describing—

(1) the relationship of bank angle, load factor, and stalling speed.
(2) overbanking tendency.
(3) the establishment of the recommended entry airspeed.
(4) orientation, division of attention. and planning.
(5) coordination of flight controls.
(6) entry and rollout technique.

b. Exhibits instructional knowledge of common errors related to steep turns by describing—

(1) uncoordinated use of flight controls.
(2) loss of orientation.
(3) unintentional stall or spin.

(4) excessive deviation from desired heading during rollout.

c. Demonstrates and simultaneously explains steep turns from an instructional standpoint.
d. Analyzes and corrects common errors related to steep turns.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe steep turns as this area of skill would be taught to a student.
b. Selecting common errors related to steep turns, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and simultaneously explain a steep turn.
d. Simulating common errors related to steep turns, and evaluating the applicant's ability to analyze and correct those errors.

H. TASK: STEEP SPIRALS (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to steep spirals by describing—

(1) the relationship of bank angle, load factor, and stalling speed.
(2) overbanking tendency.
(3) orientation, division of attention, and planning.
(4) coordination of flight controls.
(5) entry technique.
(6) wind drift correction to maintain a constant distance from the ground reference point.
(7) how to maintain desired airspeed.
(8) relationship of steep spirals and off-field landings.

b. Exhibits instructional knowledge of common errors related to steep spirals by describing—

(1) uncoordinated use of flight controls.
(2) excessive airspeed variations.

(3) improper bank variations to correct for wind drift.
(4) loss of orientation.
(5) an unintentional stall.
(6) improper rollout technique.

c. Demonstrates and simultaneously explains steep spirals from an instructional standpoint.
d. Analyzes and corrects common errors related to steep spirals.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe steep spirals as this area of skill would be taught to a student.
b. Selecting common errors related to steep spirals, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and simultaneously explain a steep spiral.
d. Simulating common errors related to steep spirals, and evaluating the applicant's ability to analyze and correct those errors.

X. AREA OF OPERATION: *PERFORMANCE AIRSPEEDS*

NOTE: The examiner will select at least one TASK

A. TASK: **MINIMUM SINK AIRSPEED** (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to minimum sink airspeed by describing the—

(1) related aerodynamic factors.
(2) use of this speed.
(3) establishment and maintenance of this speed.

b. Exhibits instructional knowledge of common errors related to minimum sink airspeed by describing the—

(1) improper determination of this speed.
(2) rough or erratic pitch attitude and airspeed control.

c. Demonstrates and simultaneously explains minimum sink airspeed from an instructional standpoint.
d. Analyzes and corrects common errors related to minimum sink airspeed.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe minimum sink airspeed as this area of skill would be taught to a student.
b. Selecting common errors related to minimum sink airspeed, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and simultaneously explain minimum sink airspeed.
d. Simulating common errors related to minimum sink airspeed, and evaluating the applicant's ability to analyze and correct those errors.

B. TASK: SPEED-TO-FLY (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to speed-to-fly by describing the—

(1) factors related to the determination of speed-to-fly.
(2) use of this speed.
(3) establishment and maintenance of this speed for a given situation.

b. Exhibits instructional knowledge of common errors related to speed-to-fly by describing the—

(1) improper determination of this speed.
(2) rough or erratic pitch attitude and airspeed control.

c. Demonstrates and simultaneously explains speed-to-fly from an instructional standpoint.
d. Analyzes and corrects common errors related to speed-to-fly.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe speed-to-fly as this area of skill would be taught to a student.
b. Selecting common errors related to speed-to-fly, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and simultaneously explain speed-to-fly.
d. Simulating common errors related to speed-to-fly, and evaluating the applicant's ability to analyze and correct those errors.

XI. 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 skill, the applicant will still be expected to demonstrate satisfactory instructional knowledge of the selected TASK through oral questioning.

A. TASK: THERMAL SOARING (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to thermal soaring by describing the—

(1) process by which thermals are produced.
(2) recognition of the presence of a thermal.
(3) initial entry into a thermal.
(4) analysis of a thermal's structure and the determination of the proper direction of turn to remain within a thermal.
(5) coordinated control technique and proper planning to remain within a thermal.
(6) importance of maintaining orientation with ground references, wind, and other aircraft.
(7) importance of maintaining proper airspeeds in and between thermals.
(8) use of proper techniques to re-enter a thermal.

b. Exhibits instructional knowledge of common errors related to thermal soaring by describing—

(1) failure to maintain proper airspeeds in and between thermals.
(2) rough control technique.
(3) poor division of attention resulting in failure to recognize when entering or flying out of a thermal.
(4) improper technique during initial entry into a thermal.
(5) faulty control touch, coordination, and planning to remain within a thermal.
(6) faulty division of attention in maintaining orientation with ground references and wind.
(7) failure to properly scan for other aircraft.

(8) poor planning and technique when attempting to re-enter a thermal.

c. Demonstrates and simultaneously explains thermal soaring from an instructional standpoint.

d. Analyzes and corrects common errors related to thermal soaring.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe thermal soaring as this area of skill would be taught to a student.

b. Selecting common errors related to thermal soaring, and asking the applicant to explain the recognition and correction of those errors.

c. Asking the applicant to demonstrate and simultaneously explain thermal soaring.

d. Simulating common errors related to thermal soaring, and evaluating the applicant's ability to analyze and correct those errors.

B. TASK: RIDGE AND SLOPE SOARING (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to ridge and slope soaring by describing the—

(1) terrain features and wind conditions that create orographic lift.

(2) importance of an accurate estimate of terrain height.

(3) initial entry into an area of lift.

(4) importance of smooth, precise, and coordinated control technique.

(5) maintenance of a safe lateral distance from the terrain.

(6) use of proper techniques to re-enter an area of lift.

(7) procedures for approaching and crossing ridges.

(8) importance of planning to fly within a safe gliding distance of an acceptable landing area.

(9) maintenance of orientation with ground references and other aircraft.

(10) importance of being constantly aware of the possibility of deteriorating weather.
(11) importance of proper coordination between the glider pilot and the tow pilot.

b. Exhibits instructional knowledge of common errors related to ridge and slope soaring by describing—

(1) hazards of approaching the ridge or slope lift area at approximately a 90° angle or from the downwind side.
(2) failure to maintain proper airspeed while in lift areas.
(3) poor division of attention resulting in failure to promptly recognize when leaving lift areas or entering high sink areas.
(4) poor control touch and coordination.
(5) poor division of attention in maintaining orientation with ground references and wind.
(6) failure to properly scan for other aircraft.
(7) failure to plan the flight so an acceptable landing area is within gliding distance.

c. Demonstrates and simultaneously explains ridge and slope soaring from an instructional standpoint.
d. Analyzes and corrects common errors related to ridge and slope soaring.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe ridge and slope soaring as this area of skill would be taught to a student.
b. Selecting common errors related to ridge and slope soaring, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and simultaneously explain ridge and slope soaring.
d. Simulating common errors related to ridge and slope soaring, and evaluating the applicant's ability to analyze and correct those errors.

C. TASK: WAVE SOARING (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to wave soaring by describing the—

(1) terrain and weather conditions that create standing waves.
(2) location of a lift area.
(3) technique for entering a lift area.
(4) importance of smooth, precise, and coordinated control technique.
(5) use of proper techniques to re-enter an area of lift.
(6) maintenance of orientation with ground references and other aircraft.
(7) recognition of rotor and wave turbulence and proper pilot technique.
(8) importance of proper coordination between the glider pilot and the tow pilot.
(9) coordination with air traffic control, as appropriate.
(10) maintenance of proper airspeeds.
(11) importance of being constantly aware of the possibility of deteriorating weather.
(12) importance of having proper equipment and training for high altitude flight.

b. Exhibits instructional knowledge of common errors related to wave soaring by describing—

(1) erratic airspeed control while in the turbulence of a rotor.
(2) failure to maintain proper airspeed while in lift area.
(3) rough control technique.
(4) poor division of attention resulting in failure to promptly recognize when leaving lift areas or entering high sink areas.
(5) faulty control touch, coordination, and planning to remain within the lift area.
(6) poor division of attention in maintaining orientation with ground references and wind.
(7) failure to properly scan for other aircraft.
(8) failure to have proper equipment and training for high altitude flight.

e. Demonstrates and simultaneously explains wave oaring from an instructional standpoint.
d. Analyzes and corrects common errors related to ave soaring.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe wave soaring as this area of skill would be taught to a student.
b. Selecting common errors related to wave soaring, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and simultaneously explain wave soaring.
d. Simulating common errors related to wave soaring, and evaluating the applicant's ability to analyze and correct those errors.

XII. AREA OF OPERATION: *APPROACHES, LANDINGS,, AND AFTER-LANDING* PROCEDURES

NOTE: The examiner will select at least one TASK.

A. TASK: TRAFFIC PATTERN (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to a traffic pattern by describing the—

(1) segments (or legs) of a normal glider traffic pattern.
(2) importance of pilot awareness of co-existing traffic patterns/ runways, the use of proper visual scanning technique, and the maintenance of spacing on other aircraft.
(3) procedures applicable to flying a normal traffic pattern.
(4) completion of the pre-landing checklist.
(5) proper technique for wind drift correction.
(6) the appropriate airspeed.
(7) factors (including approximate altitudes at various points) that are associated with pilot judgment and precision in the pattern.
(8) selection of touchdown and stop points.
(9) appropriate corrections and compensations for lift areas, sink areas, and changes in wind speed and direction.
(10) appropriate corrections for wind gradient.
(11) proper planning and coordination of turns.
(12) proper planning and use of dive brakes, spoilers, and flaps.

b. Exhibits instructional knowledge of common errors related to traffic patterns by describing—

(1) failure to scan properly and have proper spacing.
(2) poorly planned entry leg.
(3) improper correction for wind drift.
(4) rough or uncoordinated control technique.
(5) poor judgment in the selection of the touchdown and stop points.
(6) failure to maintain the appropriate airspeed.

(7) failure to apply needed corrections at various points in the pattern.
(8) the hazards of a low base leg and a low uncoordinated turn to final.

c. Demonstrates and simultaneously explains a traffic pattern from an instructional standpoint.
d. Analyzes and corrects common errors related to traffic patterns.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe a traffic pattern as this area of skill would be taught to a student.
b. Selecting common errors related to traffic patterns, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and simultaneously explain a traffic pattern.
d. Simulating common errors related to traffic patterns, and evaluating the applicant's ability to analyze and correct those errors.

B. TASK: NORMAL AND CROSSWIND LANDINGS (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to normal and crosswind landings by describing—

(1) obstructions and other hazards which should be considered.
(2) how to determine or estimate wind speed and direction.
(3) the proper glidepath to the selected touchdown area, at the recommended airspeed.
(4) the proper use of dive brakes, spoilers, or flaps to achieve accuracy of touchdown.
(5) coordination of flight controls.
(6) trim technique.
(7) appropriate correction for wind gradient.
(8) the most suitable crosswind technique.

(9) timing, judgment, and control touch during the round-out and touchdown.
(10) directional control after touchdown.
(11) the appropriate wing attitude and the proper use of brakes after touchdown.

b. Exhibits instructional knowledge of common errors related to normal and crosswind landings by describing—

(1) poor judgment of glidepath and the improper use of dive brakes, spoilers, or flaps.
(2) rough, hesitant, or uncoordinated control technique.
(3) improper airspeed control.
(4) improper correction for crosswind.
(5) failure to correct for wind gradient.
(6) improper technique during round-out and touchdown.
(7) poor directional control after touchdown.
(8) improper use of brakes.

c. Demonstrates and simultaneously explains a normal or a crosswind landing from an instructional standpoint.
d. Analyzes and corrects common errors related to a normal or a crosswind landing.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe normal and crosswind landings as this area of skill would be taught to a student.
b. Selecting common errors related to normal and crosswind landings, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and simultaneously explain a normal or a crosswind landing.
d. Simulating common errors related to a normal or a crosswind landing, and evaluating the applicant's ability to analyze and correct those errors.

C. TASK: **FORWARD SLIP TO A LANDING** (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to a forward slip to a landing by describing—

(1) obstructions and other hazards which should be considered.
(2) proper glider configuration.
(3) a stabilized slip to the selected touchdown area.
(4) possible airspeed indication errors.
(5) proper application of flight controls.
(6) proper crosswind technique.
(7) trim technique.
(8) appropriate correction for wind gradient.
(9) timing, judgment, and control touch during transition from slip to touchdown.
(10) directional control after touchdown.
(11) the appropriate wing attitude and the proper use of brakes after touchdown.

b. Exhibits instructional knowledge of common errors related to forward slips to landings by describing—

(1) failure to establish proper glider configuration.
(2) failure to maintain a stabilized slip.
(3) failure to use proper technique to achieve touchdown accuracy.
(4) rough, hesitant, or uncoordinated control technique.
(5) improper correction for crosswind.
(6) failure to correct for wind gradient.
(7) improper technique during round-out and touchdown.
(8) poor directional control after touchdown.
(9) improper use of brakes.

c. Demonstrates and simultaneously explains a forward slip to a landing from an instructional standpoint.
d. Analyzes and corrects common errors related to forward slips to landings.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe a forward slip to a landing as this maneuver would be taught to a student.
b. Selecting common errors related to forward slips to landings, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and simultaneously explain a forward slip to a landing.
d. Simulating common errors related to forward slips to landings, and evaluating the applicant's ability to analyze and correct those errors.

D. TASK: DOWNWIND LANDING (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to a downwind landing by describing—

(1) obstructions and other hazards which should be considered.
(2) the windspeed above which a downwind landing should not be attempted.
(3) how to determine or estimate wind speed and direction.
(4) the length of the final approach of a downwind landing compared with that of a normal landing.
(5) the proper glidepath to the selected touchdown area, at the recommended airspeed.
(6) the proper use of dive brakes, spoilers, or flaps to achieve accuracy of touchdown.
(7) coordination of flight controls.
(8) trim technique.
(9) appropriate correction for wind gradient.
(10) timing, judgment, and control touch during the round-out and touchdown.
(11) directional control after touchdown.
(12) the appropriate wing attitude and the proper use of brakes after touchdown.

b. Exhibits instructional knowledge of common errors related to downwind landings by describing—

(1) poor judgment of glidepath and the improper use of dive brakes, spoilers, or flaps.

(2) rough, hesitant, or uncoordinated control technique.
(3) the unintentional slowing of airspeed due to higher groundspeed.
(4) improper correction for wind gradient.
(5) improper technique during roundout and touchdown.
(6) poor directional control after touchdown.
(7) improper use of brakes.

c. Demonstrates and simultaneously explains a downwind landing from an instructional standpoint.
d. Analyzes and corrects common errors related to downwind landings.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe a downwind landing as this maneuver would be taught to a student.
b. Selecting common errors related to downwind landings, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and simultaneously explain a downwind landing.
d. Simulating common errors related to downwind landings, and evaluating the applicant's ability to analyze and correct those errors.

E. TASK: SIMULATED OFF-AIRPORT LANDING (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

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

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to a simulated off-airport landing by describing—

(1) how to select a suitable landing area.
(2) how to estimate wind speed and direction.
(3) the planning and execution of the approach to the selected landing area without the use of the altimeter.

(4) techniques that can be used to compensate for undershooting or overshooting the selected landing area.

b. Exhibits instructional knowledge of common errors related to a simulated off-airport landing by describing—

(1) improper airspeed control.
(2) poor judgment in the selection of a landing area.
(3) failure to properly estimate wind speed and direction
(4) failure to fly most suitable pattern for existing situation.
(5) undershooting or overshooting selected landing area.

c. Demonstrates and simultaneously explains a simulated off-airport landing from an instructional standpoint.
d. Analyzes and corrects common errors related to simulated off-airport landing.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe a simulated off-airport landing as this maneuver would be taught to a student.
b. Selecting common errors related to simulated off-airport landings, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and simultaneously explain a simulated off-airport landing.
d. Simulating common errors related to a simulated off-airport landing, and evaluating the applicant's ability to analyze and correct those errors.

F. TASK: AFTER-LANDING PROCEDURES (G)

REFERENCES: FAA-S-8081-1, FAA-S-8081-2; Glider Handbook or Manual.

1. Objective. To determine that the applicant:

a. Exhibits instructional knowledge of the elements related to after-landing procedures by describing—

(1) taxi technique and procedures (powered glider).
(2) parking procedure and technique.
(3) engine shutdown (powered glider).
(4) the proper method of securing the glider.
(5) post-flight inspection.
(6) refueling (powered glider).

b. Exhibits instructional knowledge of common errors related to after-landing procedures by describing—

(1) hazards of failure to follow recommended procedures.
(2) poor planning, improper technique, or poor judgment in the performance of after-landing procedures.

c. Demonstrates and simultaneously explains after-landing procedures from an instructional standpoint.
d. Analyzes and corrects common errors related to after-landing procedures.

2. Action. The examiner will determine that the applicant's performance meets the objective by:

a. Asking the applicant to describe after-landing procedures as this area of skill would be taught to a student.
b. Selecting common errors related to after-landing procedures, and asking the applicant to explain the recognition and correction of those errors.
c. Asking the applicant to demonstrate and simultaneously explain after-landing procedures.
d. Simulating common errors related to after-landing procedures, and evaluating the applicant's ability to analyze and correct those errors.

PRACTICAL TEST CHECKLIST

FLIGHT INSTRUCTOR GLIDER

(SUGGESTED)

APPLICANT'S NAME

EXAMINER'S NAME

DATE

TYPE CHECK_____

I. FUNDAMENTALS OF INSTRUCTION

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

II. TECHNICAL SUBJECT AREAS

- **A.** Aeromedical Factors
- **B.** Visual Scanning and Collision Avoidance
- **C.** Glider Aerodynamics
- **D.** Elevators, Ailerons, and Rudder
- **E.** Trim Devices
- **F.** High-Lift Devices
- **G.** High-Drag Devices
- **H.** Glider Weight and Balance
- **I.** Flight Preparation and Planning
- **J.** Federal Aviation Regulations
- **K.** Publications
- **L.** Logbook Entries and Certificate Endorsements

III. PREFLIGHT PREPARATION

- **A.** Certificates and Documents
- **B.** Obtaining Weather Information
- **C.** Operation of Systems
- **D.** Determining Performance and Limitations
- **E.** Equipment

IV. PREFLIGHT LESSON ON MANEUVER TO BE PERFORMED IN FLIGHT

- **A.** Maneuver Lesson

V. GROUND OPERATIONS

- **A.** Assembly
- **B.** Ground Handling
- **C.** Visual Inspection
- **D.** Pre-Takeoff Check

VI. AERO TOW LAUNCH

- **A.** Visual Signals
- **B.** Normal and Crosswind Takeoffs
- **C.** Establishment and Maintenance of Tow Positions
- **D.** Slack Line
- **E.** Boxing the Wake
- **F.** Tow Release
- **G.** Aero Tow Abnormal Occurrences

VII. GROUND TOW LAUNCH (AUTO or WINCH)

- **A.** Visual Signals
- **B.** Normal and Crosswind Takeoffs
- **C.** Ground Launch Abnormal Occurrences

VIII. POWERED GLIDER SELF-LAUNCH

- **A.** Determining Performance and Limitations
- **B.** Visual Inspection
- **C.** Engine Starting
- **D.** Taxiing
- **E.** Pre-Takeoff Check
- **F.** Takeoff and Climb
- **G.** Engine Shutdown in Flight
- **H.** Engine Restart in Flight
- **I.** Abnormal Occurrences
- **J.** Approach and Landings With Power

IX. IN-FLIGHT MANEUVERS

- **A.** Straight Glides
- **B.** Turns to Headings
- **C.** Maneuvering at Critically Slow Airspeed
- **D.** Stall Recognition and Recovery
- **E.** Spins
- **F.** Recovery From Unusual Attitudes

- **G.** Steep Turns
- **H.** Steep Spirals

X. PERFORMANCE AIRSPEEDS

- **A.** Minimum Sink Airspeed
- **B.** Speed-to-fly

XI. SOARING TECHNIQUES

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

XII. APPROACHES, LANDINGS, AND AFTER-LANDING PROCEDURES

- **A.** Traffic Pattern
- **B.** Normal and Crosswind Landings
- **C.** Forward Slip to a Landing
- **D.** Downwind Landing
- **E.** Simulated Off-Airport Landing
- **F.** After-Landing Procedures

APPLICANT'S PRACTICAL TEST CHECKLIST

(SUGGESTED)

APPOINTMENT WITH INSPECTOR OR EXAMINER:

NAME

TIME/DATE_____

ACCEPTABLE AIRCRAFT

- Aircraft Documents:
  - Airworthiness Certificate
  - Registration Certificate
  - Operating Limitations
- Pilot's Operating Handbook or FAA-Approved Flight Manual
- Aircraft Maintenance Records:
  - Airworthiness Inspections
- FCC Station License

PERSONAL EQUIPMENT

- Current Aeronautical Charts
- Computer and Plotter
- Flight Plan Form
- Flight Logs
- Current AIM

PERSONAL RECORDS

- Pilot Certificate
- Completed Application for an Airman Certificate and/or Rating (FAA Form 8710-1)
- Airman Written Test Report (AC Form 8080-2)
- Logbook with Instructor's Endorsement
- Notice of Disapproval (if applicable)
- Approved School Graduation Certificate (if applicable)
- Examiner's Fee (if applicable)

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