



U.S. Department
of Transportation

**Federal Aviation
Administration**

FAA-S-ACS-6B

(Condensed to ASEL only – 06/13/2018)
(Use only with LIF Training Syllabus)

Private Pilot – Airplane

Airman Certification Standards

June 2018

Flight Standards Service
Washington, DC 20591

Acknowledgments

The U.S. Department of Transportation, Federal Aviation Administration (FAA), Office of Safety Standards, Regulatory Support Division, Airman Testing Branch, P.O. Box 25082, Oklahoma City, OK 73125 developed this Airman Certification Standards (ACS) document with the assistance of the aviation community. The FAA gratefully acknowledges the valuable support from the many individuals and organizations who contributed their time and expertise to assist in this endeavor.

Availability

This ACS is available for download from www.faa.gov. Please send comments regarding this document using the following link to the Airman Testing Branch Mailbox.

Material in FAA-S-ACS-6B will be effective June 11, 2018. All previous editions of the Private Pilot – Airplane Airman Certification Standards will be obsolete as of this date for airplane applicants.

Foreword

The Federal Aviation Administration (FAA) has published the Private Pilot – Airplane Airman Certification Standards (ACS) document to communicate the aeronautical knowledge, risk management, and flight proficiency standards for the private pilot certification in the airplane category, single-engine land and sea; and multiengine land and sea classes. This ACS incorporates and supersedes FAA-S-ACS-6A, Private Pilot – Airplane Airman Certification Standards, Change 1.

The FAA views the ACS as the foundation of its transition to a more integrated and systematic approach to airman certification. The ACS is part of the safety management system (SMS) framework that the FAA uses to mitigate risks associated with airman certification training and testing. Specifically, the ACS, associated guidance, and test question components of the airman certification system are constructed around the four functional components of an SMS:

- Safety Policy that defines and describes aeronautical knowledge, flight proficiency, and risk management as integrated components of the airman certification system;
- Safety Risk Management processes through which both internal and external stakeholders identify changes in regulations, safety recommendations, or other factors. These changes are then evaluated to determine whether they require modification of airman testing and training materials;
- Safety Assurance processes to ensure the prompt and appropriate incorporation of changes arising from new regulations and safety recommendations; and
- Safety Promotion in the form of ongoing engagement with both external stakeholders (e.g., the aviation training industry) and FAA policy divisions.

The FAA has developed this ACS and its associated guidance in collaboration with a diverse group of aviation training experts. The goal is to drive a systematic approach to all components of the airman certification system, including knowledge test question development and conduct of the practical test. The FAA acknowledges and appreciates the many hours that these aviation experts have contributed toward this goal. This level of collaboration, a hallmark of a robust safety culture, strengthens and enhances aviation safety at every level of the airman certification system.

John S. Duncan
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Revision History

Document #	Description	Revision Date
FAA-S-8081-14B	Private Pilot Practical Test Standards for Airplane, (Changes 1-6)	Nov 1, 2011
FAA-S-ACS-6	Private Pilot - Airplane Airman Certification Standards	Jun 1, 2016
FAA-S-ACS-6	Private Pilot - Airplane Airman Certification Standards (Change 1)	Jun 15, 2016
FAA-S-ACS-6A	Private Pilot - Airplane Airman Certification Standards (Change 1)	Jun 12, 2017
FAA-S-ACS-6B	Private Pilot - Airplane Airman Certification Standards	Jun 11, 2018

Major Enhancements to Version FAA-S-ACS-6B

- Revised Introduction and appendices to account for FAA reorganization.
- Replaced numerous prescriptive references to airplane configuration with more general references.
- Revised numerous Tasks in all Areas of Operation to include more consistent element descriptions.
- Added language to account for Part 68 BasicMed.
- Included SFRA and SATR, if applicable, in Area of Operation I, Task E.
- Distinguished different types of hypoxia in Area of Operation I, Task H.
- Broadened scope of engine starting conditions knowledge element in Area of Operation II, Task C.
- Revised Area of Operation III, Task A to include runway lighting systems.
- Revised Area of Operation IV to require touch down a proper pitch attitude.
- Restored distance tolerance in Area of Operation IV, Task B.
- Added airspeed tolerance to Area of Operation IX, Task A.
- Revised Area of Operation X, Tasks C and D to match the Instrument Rating Airman Certification Standards.
- Correlated knowledge elements of multiengine airplane engine inoperative flight to zero sideslip.
- Revised language regarding reduction of drag with one engine inoperative in terms of the manufacturer's recommendation or appropriate use of flight controls.
- Added CFIT to low altitude maneuvering risk elements.
- Added a reference to Task Objectives and enhanced Appendix 7: Aircraft, Equipment, and Operational Requirements & Limitations, regarding flight solely by reference to instruments.
- Updated the following Appendices:
 - Appendix 1: The Knowledge Test Eligibility, Prerequisites, and Testing Centers
 - Appendix 5: Practical Test Roles, Responsibilities, and Outcomes
 - Appendix 6: Safety of Flight
 - Appendix 7: Aircraft, Equipment, and Operational Requirements & Limitations
 - Appendix 9: References
 - Appendix 10: Abbreviations and Acronyms

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Introduction

Airman Certification Standards Concept

The goal of the airman certification process is to ensure the applicant possesses the knowledge, ability to manage risks, and skill consistent with the privileges of the certificate or rating being exercised, in order to act as Pilot-in-command (PIC).

In fulfilling its responsibilities for the airman certification process, the Federal Aviation Administration (FAA) Flight Standards Service (AFS) plans, develops, and maintains materials related to airman certification training and testing. These materials have included several components. The FAA knowledge test measures mastery of the aeronautical knowledge areas listed in Title 14 of the Code of Federal Regulations (14 CFR) part 61. Other materials, such as handbooks in the FAA-H-8083 series, provide guidance to applicants on aeronautical knowledge, risk management, and flight proficiency.

Safe operations in today's National Airspace System (NAS) require integration of aeronautical knowledge, risk management, and flight proficiency standards. To accomplish these goals, the FAA drew upon the expertise of organizations and individuals across the aviation and training community to develop the Airman Certification Standards (ACS). The ACS integrates the elements of knowledge, risk management, and skill listed in 14 CFR part 61 for each airman certificate or rating. It thus forms a more comprehensive standard for what an applicant must know, consider, and do for the safe conduct and successful completion of each Task to be tested on both the qualifying FAA knowledge test and the oral and flight portions of the practical test.

During the ground and flight portion of the practical test, the FAA expects evaluators to assess the applicant's mastery of the topic in accordance with the level of learning most appropriate for the specified Task. The oral questioning will continue throughout the entire practical test. For some topics, the evaluator will ask the applicant to describe or explain. For other items, the evaluator will assess the applicant's understanding by providing a scenario that requires the applicant to appropriately apply and/or correlate knowledge, experience, and information to the circumstances of the given scenario. The flight portion of the practical test requires the applicant to demonstrate knowledge, risk management, flight proficiency, and operational skill in accordance with the ACS.

Note: As used in the ACS, an evaluator is any person authorized to conduct airman testing (e.g., an FAA Aviation Safety Inspector (ASI), Designated Pilot Examiner (DPE), or other individual authorized to conduct test for a certificate or rating).

Using the ACS

The ACS consists of **Areas of Operation** arranged in a logical sequence, beginning with Preflight Preparation and ending with Postflight Procedures. Each Area of Operation includes **Tasks** appropriate to that Area of Operation. Each Task begins with an **Objective** stating what the applicant should know, consider, and/or do. The ACS then lists the aeronautical knowledge, risk management, and skill elements relevant to the specific Task, along with the conditions and standards for acceptable performance. The ACS uses **Notes** to emphasize special considerations. The ACS uses the terms "will" and "must" to convey directive (mandatory) information. The term "may" denotes items that are recommended but not required. The **References** for each Task indicate the source material for Task elements. For example, in Tasks such as "Weather products required for preflight planning, current and forecast weather for departure, en route, and arrival phases of flight." (PA.I.C.K2), the applicant should be prepared for questions on any weather product presented in the references for that Task.

The abbreviation(s) within parentheses immediately following a Task refer to the category and/or class airplane appropriate to that Task. The meaning of each abbreviation is as follows:

ASEL: Airplane – Single-Engine Land
ASES: Airplane – Single-Engine Sea
AMEL: Airplane – Multiengine Land
AMES: Airplane – Multiengine Sea

Note: When administering a test, the Tasks appropriate to the class airplane (ASEL, ASES, AMEL, or AMES) used for the test must be included in the plan of action. The absence of a class indicates the Task is for all classes.

Each Task in the ACS is coded according to a scheme that includes four elements. For example:

PA.XI.A.K1:

PA = Applicable ACS (Private Pilot ? Airplane)

XI = Area of Operation (Night Operations)

A = Task (Night Preparation)

K1 = Task element Knowledge 1 (Physiological aspects of vision related to night flying.)

Knowledge test questions are linked to the ACS codes, which will ultimately replace the system of Learning Statement Codes (LSC). After this transition occurs, the Airman Knowledge Test Report (AKTR) will list an ACS code that correlates to a specific Task element for a given Area of Operation and Task. Remedial instruction and re-testing will be specific, targeted, and based on specified learning criteria. Similarly, a Notice of Disapproval for the practical test will use the ACS codes to identify the deficient Task elements.

The current knowledge test management system does not have the capability to print ACS codes. Until a new test management system is in place, the LSC (e.g., "PLT058") code will continue to be displayed on the AKTR. The LSC codes are linked to references leading to broad subject areas. By contrast, each ACS code is tied to a unique Task element in the ACS itself. Because of this fundamental difference, there is no one-to-one correlation between LSC codes and ACS codes.

Because all active knowledge test questions for the Private Pilot Airplane (PAR) Knowledge Test have been aligned with the corresponding ACS, evaluators can continue to use LSC codes in conjunction with the ACS for the time being. The evaluator should look up the LSC code(s) on the applicant's AKTR in the Learning Statement Reference Guide available using the following link: [Learning Statement Reference Guide](#). After noting the subject area(s), the evaluator can use the corresponding Area(s) of Operation/Task(s) in the ACS to narrow the scope of material for retesting, and to evaluate the applicant's understanding of that material in the context of the appropriate ACS Area(s) of Operation and Task(s).

Applicants for a combined Private Pilot Certificate with Instrument Rating, in accordance with 14 CFR part 61, section 61.65 (a) and (g), must pass all areas designated in the Private Pilot – Airplane ACS and the Instrument Rating – Airplane ACS. Evaluators need not duplicate Tasks. For example, only one preflight demonstration would be required; however, the Preflight Task from the Instrument Rating – Airplane ACS would be more extensive than the Preflight Task from the Private Pilot – Airplane ACS to ensure readiness for Instrument Flight Rules (IFR) flight.

A combined certificate and rating evaluation should be treated as one practical test, requiring only one application and resulting in only one temporary certificate, disapproval notice, or letter of discontinuance, as applicable. Failure of any Task will result in a failure of the entire test and application. Therefore, even if the deficient maneuver was instrument related and the performance of all visual flight rules (VFR) Tasks was determined to be satisfactory, the applicant will receive a notice of disapproval.

The applicant must pass the Private Pilot Airplane (PAR) Knowledge Test before taking the private pilot practical test. The practical test is conducted in accordance with the ACS and FAA regulations that are current as of the date of the test. Further, the applicant must pass the ground portion of the practical test before beginning the flight portion.

The ground portion of the practical test allows the evaluator to determine whether the applicant is sufficiently prepared to advance to the flight portion of the practical test. The oral questioning will continue throughout the entire practical test.

The FAA encourages applicants and instructors to use the ACS when preparing for knowledge tests and practical tests. The FAA will revise the ACS as circumstances require.

I. PREFLIGHT PREPARATION

Task	A. Pilot Qualifications
References	14 CFR parts 61, 68, 91; FAA-H-8083-2, FAA-H-8083-25; AC 68-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with airman and medical certificates including privileges, limitations, currency, and operating as pilot-in-command (PIC) as a private pilot.
Knowledge	The applicant demonstrates understanding of:
<i>PA.I.A.K1</i>	Requirements for certification, recent flight experience, and recordkeeping.
<i>PA.I.A.K2</i>	Privileges and limitations.
<i>PA.I.A.K3</i>	Medical certificates: class, expiration, privileges, temporary disqualifications.
<i>PA.I.A.K4</i>	Documents required to exercise private pilot privileges.
<i>PA.I.A.K5</i>	Part 68 BasicMed privileges and limitations.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.I.A.R1</i>	Failure to distinguish proficiency versus currency.
<i>PA.I.A.R2</i>	Flying unfamiliar airplanes, or operating with unfamiliar flight display systems, and avionics.
Skills	The applicant demonstrates the ability to:
<i>PA.I.A.S1</i>	Apply requirements to act as PIC under Visual Flight Rules (VFR) in a scenario given by the evaluator.

Task	B. Airworthiness Requirements
References	14 CFR parts 39, 43, 91; FAA-H-8083-2, FAA-H-8083-25
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with airworthiness requirements, including airplane certificates.
Knowledge	The applicant demonstrates understanding of:
<i>PA.I.B.K1</i>	General airworthiness requirements and compliance for airplanes, including:
<i>PA.I.B.K1a</i>	a. Certificate location and expiration dates
<i>PA.I.B.K1b</i>	b. Required inspections and airplane logbook documentation
<i>PA.I.B.K1c</i>	c. Airworthiness Directives and Special Airworthiness Information Bulletins
<i>PA.I.B.K1d</i>	d. Purpose and procedure for obtaining a special flight permit
<i>PA.I.B.K2</i>	Pilot-performed preventive maintenance.
<i>PA.I.B.K3</i>	Equipment requirements for day and night VFR flight, to include:
<i>PA.I.B.K3a</i>	a. Flying with inoperative equipment
<i>PA.I.B.K3b</i>	b. Using an approved Minimum Equipment List (MEL)
<i>PA.I.B.K3c</i>	c. Kinds of Operation Equipment List (KOEL)
<i>PA.I.B.K3d</i>	d. Required discrepancy records or placards
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.I.B.R1</i>	Inoperative equipment discovered prior to flight.
Skills	The applicant demonstrates the ability to:
<i>PA.I.B.S1</i>	Locate and describe airplane airworthiness and registration information.
<i>PA.I.B.S2</i>	Determine the airplane is airworthy in a scenario given by the evaluator.
<i>PA.I.B.S3</i>	Apply appropriate procedures for operating with inoperative equipment in a scenario given by the evaluator.

I. PREFLIGHT PREPARATION (continued)

Task	C. Weather Information
References	14 CFR part 91; FAA-H-8083-25; AC 00-6, AC 00-45, <u>AC 00-54</u> ; AIM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with weather information for a flight under VFR.
Knowledge	The applicant demonstrates understanding of:
<i>PA.I.C.K1</i>	Acceptable sources of weather data for flight planning purposes.
<i>PA.I.C.K2</i>	Weather products and resources required for preflight planning, current and forecast weather for departure, en route, and arrival phases of flight.
<i>PA.I.C.K3</i>	Meteorology applicable to the departure, en route, alternate, and destination under VFR in Visual Meteorological Conditions (VMC) to include expected climate and hazardous conditions such as:
<i>PA.I.C.K3a</i>	a. Atmospheric composition and stability
<i>PA.I.C.K3b</i>	b. Wind (e.g., crosswind, tailwind, windshear, <u>mountain wave</u> , etc.)
<i>PA.I.C.K3c</i>	c. Temperature
<i>PA.I.C.K3d</i>	d. Moisture/precipitation
<i>PA.I.C.K3e</i>	e. Weather system formation, including air masses and fronts
<i>PA.I.C.K3f</i>	f. Clouds
<i>PA.I.C.K3g</i>	g. Turbulence
<i>PA.I.C.K3h</i>	h. Thunderstorms and microbursts
<i>PA.I.C.K3i</i>	i. Icing and freezing level information
<i>PA.I.C.K3j</i>	j. Fog
<i>PA.I.C.K3k</i>	k. Frost
<i>PA.I.C.K4</i>	Flight deck displays of digital weather and aeronautical information.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.I.C.R1</i>	Factors involved in making the go/no-go and continue/divert decisions, to include:
<i>PA.I.C.R1a</i>	a. Circumstances that would make diversion prudent
<i>PA.I.C.R1b</i>	b. Personal weather minimums
<i>PA.I.C.R.1c</i>	c. Hazardous weather conditions to include known or forecast icing or turbulence aloft
<i>PA.I.C.R2</i>	Limitations of:
<i>PA.I.C.R2a</i>	a. Onboard weather equipment
<i>PA.I.C.R2b</i>	b. Aviation weather reports and forecasts
<i>PA.I.C.R2c</i>	c. Inflight weather resources
Skills	The applicant demonstrates the ability to:
<i>PA.I.C.S1</i>	Use available aviation weather resources, obtain an adequate weather briefing, and correlate weather information to make a competent go/no-go decision.
<i>PA.I.C.S2</i>	Discuss the implications of at least three of the conditions listed in K3a through K3k above, using actual weather or weather conditions in a scenario provided by the evaluator.

I. PREFLIGHT PREPARATION (continued)

Task	<i>D. Cross-Country Flight Planning</i>
References	14 CFR part 91; FAA-H-8083-2, FAA-H-8083-25; Navigation Charts; Chart Supplements; AIM; NOTAMs
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with cross-country flights and VFR flight planning.
Knowledge	The applicant demonstrates understanding of:
<i>PA.I.D.K1</i>	Route planning, including consideration of different classes and special use airspace (SUA) and selection of appropriate and available navigation/communication systems and facilities.
<i>PA.I.D.K2</i>	Altitude selection accounting for terrain and obstacles, glide distance of the airplane, VFR cruising altitudes, and the effect of wind.
<i>PA.I.D.K3</i>	Calculating:
<i>PA.I.D.K3a</i>	a. Time, climb and descent rates, course, distance, heading, true airspeed, and groundspeed
<i>PA.I.D.K3b</i>	b. Estimated time of arrival to include conversion to universal coordinated time (UTC)
<i>PA.I.D.K3c</i>	c. Fuel requirements, to include reserve
<i>PA.I.D.K4</i>	Elements of a VFR flight plan.
<i>PA.I.D.K5</i>	Procedures for activating and closing a VFR flight plan.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.I.D.R1</i>	Pilot.
<i>PA.I.D.R2</i>	Aircraft.
<i>PA.I.D.R3</i>	Environment (e.g., weather, airports, airspace, terrain, obstacles).
<i>PA.I.D.R4</i>	External pressures.
<i>PA.I.D.R5</i>	Limitations of air traffic control (ATC) services.
<i>PA.I.D.R6</i>	Improper fuel planning.
Skills	The applicant demonstrates the ability to:
<i>PA.I.D.S1</i>	Prepare, present, and explain a cross-country flight plan assigned by the evaluator including a risk analysis based on real-time weather, to the first fuel stop.
<i>PA.I.D.S2</i>	Apply pertinent information from appropriate and current aeronautical charts, Chart Supplements; NOTAMs relative to airport, runway and taxiway closures; and other flight publications.
<i>PA.I.D.S3</i>	Create a navigation plan and simulate filing a VFR flight plan.
<i>PA.I.D.S4</i>	Recalculate fuel reserves based on a scenario provided by the evaluator.

I. PREFLIGHT PREPARATION (continued)

Task	<i>E. National Airspace System</i>
References	14 CFR parts 71, 91, 93; FAA-H-8083-2; Navigation Charts; AIM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with the National Airspace System (NAS) operating under VFR as a private pilot.
Knowledge	The applicant demonstrates understanding of:
<i>PA.I.E.K1</i>	Types of airspace/airspace classes and associated requirements and limitations.
<i>PA.I.E.K2</i>	Charting symbology.
<i>PA.I.E.K3</i>	Special use airspace (SUA), special flight rules areas (SFRA), temporary flight restrictions (TFR), and other airspace areas.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.I.E.R1</i>	Various classes and types of airspace.
Skills	The applicant demonstrates the ability to:
<i>PA.I.E.S1</i>	Explain the requirements for basic VFR weather minimums and flying in particular classes of airspace.
<i>PA.I.E.S2</i>	Correctly identify airspace and operate in accordance with associated communication and equipment requirements.
<i>PA.I.E.S3</i>	Explain the requirements for operating in SUA or within a TFR. Explain SATR and SFRA operations, if applicable.

Task	<i>F. Performance and Limitations</i>
References	FAA-H-8083-1, FAA-H-8083-2, FAA-H-8083-3, FAA-H-8083-25; POH/AFM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with operating an airplane safely within the parameters of its performance capabilities and limitations.
Knowledge	The applicant demonstrates understanding of:
<i>PA.I.F.K1</i>	Elements related to performance and limitations by explaining the use of charts, tables, and data to determine performance.
<i>PA.I.F.K2</i>	Factors affecting performance, to include:
<i>PA.I.F.K2a</i>	a. Atmospheric conditions
<i>PA.I.F.K2b</i>	b. Pilot technique
<i>PA.I.F.K2c</i>	c. Airplane configuration
<i>PA.I.F.K2d</i>	d. Airport environment
<i>PA.I.F.K2e</i>	e. Loading (e.g., center of gravity)
<i>PA.I.F.K2f</i>	f. Weight and balance
<i>PA.I.F.K3</i>	Aerodynamics.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.I.F.R1</i>	Inaccurate use of manufacturer's performance charts, tables, and data.
<i>PA.I.F.R2</i>	Exceeding airplane limitations.
<i>PA.I.F.R3</i>	Possible differences between calculated performance and actual performance.
Skills	The applicant demonstrates the ability to:
<i>PA.I.F.S1</i>	Compute the weight and balance, correct out-of-center of gravity (CG) loading errors and determine if the weight and balance remains within limits during all phases of flight.
<i>PA.I.F.S2</i>	Demonstrate use of the appropriate airplane manufacturer's approved performance charts, tables, and data.

I. PREFLIGHT PREPARATION (continued)

Task	G. Operation of Systems
References	FAA-H-8083-2, FAA-H-8083-3, FAA-H-8083-23, FAA-H-8083-25; POH/AFM.
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with the safe operation of systems on the airplane provided for the flight test.
Knowledge	The applicant demonstrates understanding of:
<i>PA.I.G.K1</i>	Airplane systems, to include: Note: <i>If K1 is selected, the evaluator must assess the applicant's knowledge of at least three of the following sub-elements.</i>
<i>PA.I.G.K1a</i>	a. Primary flight controls
<i>PA.I.G.K1b</i>	b. Secondary flight controls
<i>PA.I.G.K1c</i>	c. Powerplant and propeller
<i>PA.I.G.K1d</i>	d. Landing gear
<i>PA.I.G.K1e</i>	e. Fuel, oil, and hydraulic
<i>PA.I.G.K1f</i>	f. Electrical
<i>PA.I.G.K1g</i>	g. Avionics
<i>PA.I.G.K1h</i>	h. Pitot-static, vacuum/pressure, and associated flight instruments
<i>PA.I.G.K1i</i>	i. Environmental
<i>PA.I.G.K1j</i>	j. Deicing and anti-icing
<i>PA.I.G.K1k</i>	k. Water rudders (ASES, AMES)
<i>PA.I.G.K1l</i>	l. Oxygen system
<i>PA.I.G.K2</i>	Indications of and procedures for managing system abnormalities or failures.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.I.G.R1</i>	Failure to detect system malfunctions or failures.
<i>PA.I.G.R2</i>	Improper management of a system failure.
<i>PA.I.G.R3</i>	Failure to monitor and manage automated systems.
Skills	The applicant demonstrates the ability to:
<i>PA.I.G.S1</i>	Explain and operate at least three of the systems listed in K1a through K1l above.
<i>PA.I.G.S2</i>	Use appropriate checklists properly.

I. PREFLIGHT PREPARATION (continued)

Task	H. Human Factors
References	FAA-H-8083-2, FAA-H-8083-25; AIM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with personal health, flight physiology, aeromedical and human factors, as it relates to safety of flight. Note: See Appendix 6: Safety of Flight .
Knowledge	The applicant demonstrates understanding of:
<i>PA.I.H.K1</i>	The symptoms (as applicable), recognition, causes, effects, and corrective actions associated with aeromedical and physiological issues including: Note: If K1 is selected, the evaluator must assess the applicant's knowledge of at least three of the following sub-elements.
<i>PA.I.H.K1a</i>	a. Hypoxic hypoxia due to altitude increase or oxygen displacement
<i>PA.I.H.K1b</i>	b. Hyperventilation
<i>PA.I.H.K1c</i>	c. Middle ear and sinus problems
<i>PA.I.H.K1d</i>	d. Spatial disorientation
<i>PA.I.H.K1e</i>	e. Motion sickness
<i>PA.I.H.K1f</i>	f. Carbon monoxide poisoning and other forms of hypemic hypoxia
<i>PA.I.H.K1g</i>	g. Stress
<i>PA.I.H.K1h</i>	h. Fatigue
<i>PA.I.H.K1i</i>	i. Dehydration and nutrition
<i>PA.I.H.K1j</i>	j. Hypothermia
<i>PA.I.H.K1k</i>	k. Optical illusions
<i>PA.I.H.K1l</i>	l. Dissolved nitrogen in the bloodstream after scuba dives
<i>PA.I.H.K2</i>	Regulations regarding use of alcohol and drugs.
<i>PA.I.H.K3</i>	Effects of alcohol, drugs, and over-the-counter medications.
<i>PA.I.H.K4</i>	Aeronautical Decision-Making (ADM).
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks encompassing:
<i>PA.I.H.R1</i>	Aeromedical and physiological issues.
<i>PA.I.H.R2</i>	Hazardous attitudes.
<i>PA.I.H.R3</i>	Distractions, loss of situational awareness, and/or improper task management.
Skills	The applicant demonstrates the ability to:
<i>PA.I.H.S1</i>	Describe symptoms (as applicable), recognition, causes, effects, and corrective actions for at least three of the conditions listed in K1a through K1l above.
<i>PA.I.H.S2</i>	Perform self-assessment, including fitness for flight and personal minimums, for actual flight or a scenario given by the evaluator.

TASK REMOVED –	I. Water and Seaplane Characteristics, Seaplane Bases, Maritime Rules, and Aids to Marine Navigation (ASES, AMES)
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II. PREFLIGHT PROCEDURES

Task	A. Preflight Assessment
References	FAA-H-8083-2, FAA-H-8083-3, FAA-H-8083-23; POH/AFM; AC 00-6
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with preparing for safe flight.
Knowledge	The applicant demonstrates understanding of:
<i>PA.II.A.K1</i>	Pilot self-assessment.
<i>PA.II.A.K2</i>	Determining that the airplane to be used is appropriate and airworthy.
<i>PA.II.A.K3</i>	Airplane preflight inspection including:
<i>PA.II.A.K3a</i>	a. Which items must be inspected
<i>PA.II.A.K3b</i>	b. The reasons for checking each item
<i>PA.II.A.K3c</i>	c. How to detect possible defects
<i>PA.II.A.K3d</i>	d. The associated regulations
<i>PA.II.A.K4</i>	Environmental factors including weather, terrain, route selection, and obstructions.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.II.A.R1</i>	Pilot.
<i>PA.II.A.R2</i>	Aircraft.
<i>PA.II.A.R3</i>	Environment (e.g., weather, airports, airspace, terrain, obstacles).
<i>PA.II.A.R4</i>	External pressures.
<i>PA.II.A.R5</i>	Aviation security concerns.
Skills	The applicant demonstrates the ability to:
<i>PA.II.A.S1</i>	Inspect the airplane with reference to an appropriate checklist.
<i>PA.II.A.S2</i>	Verify the airplane is in condition for safe flight and conforms to its type design.

Task	B. Flight Deck Management
References	FAA-H-8083-2, FAA-H-8083-3; AC 120-71; POH/AFM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with safe flight deck management practices.
Knowledge	The applicant demonstrates understanding of:
<i>PA.II.B.K1</i>	Passenger briefing requirements, to include operation and required use of safety restraint systems.
<i>PA.II.B.K2</i>	Use of appropriate checklists.
<i>PA.II.B.K3</i>	Requirements for current and appropriate navigation data.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.II.B.R1</i>	Improper use of systems or equipment, to include automation and portable electronic devices.
<i>PA.II.B.R2</i>	Flying with unresolved discrepancies.
Skills	The applicant demonstrates the ability to:
<i>PA.II.B.S1</i>	Secure all items in the flight deck and cabin.
<i>PA.II.B.S2</i>	Conduct an appropriate pre-takeoff briefing, to include identifying the PIC, use of safety belts, shoulder harnesses, doors, sterile flight deck, and emergency procedures.
<i>PA.II.B.S3</i>	Properly program and manage the airplane's automation.

II. PREFLIGHT PROCEDURES (continued)

Task	C. Engine Starting
References	FAA-H-8083-2, FAA-H-8083-3, FAA-H-8083-25; POH/AFM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with recommended engine starting procedures.
Knowledge	The applicant demonstrates understanding of:
<i>PA.II.C.K1</i>	Starting under various conditions.
<i>PA.II.C.K2</i>	Starting the engine(s) by use of external power.
<i>PA.II.C.K3</i>	Engine limitations as they relate to starting.
Risk Mgme	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.II.C.R1</i>	Propeller safety.
Skills	The applicant demonstrates the ability to:
<i>PA.II.C.S1</i>	Position the airplane properly considering structures, other aircraft, wind, and the safety of nearby persons and property.
<i>PA.II.C.S2</i>	Complete the appropriate checklist.

II. PREFLIGHT PROCEDURES (continued)

Task	<i>D. Taxiing (ASEL, AMEL)</i>
References	FAA-H-8083-2, FAA-H-8083-3, FAA-H-8083-25; POH/AFM; AC 91-73; Chart Supplements; AIM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with safe taxi operations, including runway incursion avoidance.
Knowledge	The applicant demonstrates understanding of:
<i>PA.II.D.K1</i>	Current airport aeronautical references and information resources including Chart Supplements, airport diagram, and appropriate references.
<i>PA.II.D.K2</i>	Taxi instructions/clearances.
<i>PA.II.D.K3</i>	Airport markings, signs, and lights.
<i>PA.II.D.K4</i>	Visual indicators for wind.
<i>PA.II.D.K5</i>	Aircraft lighting.
<i>PA.II.D.K6</i>	Procedures for:
<i>PA.II.D.K6a</i>	a. Appropriate flight deck activities prior to taxi, including route planning and identifying the location of Hot Spots
<i>PA.II.D.K6b</i>	b. Radio communications at towered and nontowered airports
<i>PA.II.D.K6c</i>	c. Entering or crossing runways
<i>PA.II.D.K6d</i>	d. Night taxi operations
<i>PA.II.D.K6e</i>	e. Low visibility taxi operations
Risk Mgmt	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.II.D.R1</i>	Inappropriate activities and distractions.
<i>PA.II.D.R2</i>	Confirmation or expectation bias as related to taxi instructions.
<i>PA.II.D.R3</i>	A taxi route or departure runway change.
Skills	The applicant demonstrates the ability to:
<i>PA.II.D.S1</i>	Receive and correctly read back clearances/instructions, if applicable.
<i>PA.II.D.S2</i>	Use an airport diagram or taxi chart during taxi, if published, and maintain situational awareness.
<i>PA.II.D.S3</i>	Position the flight controls for the existing wind conditions.
<i>PA.II.D.S4</i>	Complete the appropriate checklist.
<i>PA.II.D.S5</i>	Perform a brake check immediately after the airplane begins moving.
<i>PA.II.D.S6</i>	Maintain positive control of the airplane during ground operations by controlling direction and speed without excessive use of brakes
<i>PA.II.D.S7</i>	Comply with airport/taxiway markings, signals, and ATC clearances and instructions.
<i>PA.II.D.S8</i>	Position the airplane properly relative to hold lines.

TASK REMOVED –	<i>E. Taxiing and Sailing (ASES, AMES)</i>
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II. PREFLIGHT PROCEDURES (continued)

Task	<i>F. Before Takeoff Check</i>
References	FAA-H-8083-2, FAA-H-8083-3, FAA-H-8083-23; POH/AFM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with the before takeoff check.
Knowledge	The applicant demonstrates understanding of:
<i>PA.II.F.K1</i>	Purpose of pre-takeoff checklist items including:
<i>PA.II.F.K1a</i>	a. Reasons for checking each item
<i>PA.II.F.K1b</i>	b. Detecting malfunctions
<i>PA.II.F.K1c</i>	c. Ensuring the airplane is in safe operating condition as recommended by the manufacturer
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.II.F.R1</i>	Division of attention while conducting pre-flight checks.
<i>PA.II.F.R2</i>	Unexpected runway changes by ATC.
<i>PA.II.F.R3</i>	Wake turbulence.
Skills	The applicant demonstrates the ability to:
<i>PA.II.F.S1</i>	Review takeoff performance.
<i>PA.II.F.S2</i>	Complete the appropriate checklist.
<i>PA.II.F.S3</i>	Properly position the airplane considering other aircraft, vessels, and wind.
<i>PA.II.F.S4</i>	Divide attention inside and outside the flight deck.
<i>PA.II.F.S5</i>	Verify that engine parameters and airplane configuration are suitable.

III. AIRPORT AND SEAPLANE BASE OPERATIONS

Task	A. Communications, Light Signals, and Runway Lighting Systems
References	14 CFR part 91; FAA-H-8083-2, FAA-H-8083-25; AIM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with normal and emergency radio communications, ATC light signals, and runway lighting systems to conduct safe airport operations.
Knowledge	The applicant demonstrates understanding of:
PA.III.A.K1	How to obtain proper radio frequencies.
PA.III.A.K2	Proper radio communication procedures and ATC phraseology.
PA.III.A.K3	ATC light signal recognition.
PA.III.A.K4	Appropriate use of transponders.
PA.III.A.K5	Lost communication procedures.
PA.III.A.K6	Equipment issues that could cause loss of communication.
PA.III.A.K7	Radar assistance.
PA.III.A.K8	National Transportation Safety Board (NTSB) accident/incident reporting.
PA.III.A.K9	Runway Status Lighting Systems.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.III.A.R1	Poor communication.
PA.III.A.R2	Failure to recognize and declare an emergency.
PA.III.A.R3	Confirmation or expectation bias.
Skills	The applicant demonstrates the ability to:
PA.III.A.S1	Select appropriate frequencies.
PA.III.A.S2	Transmit using phraseology and procedures as specified in the AIM.
PA.III.A.S3	Acknowledge radio communications and comply with instructions.

Task	B. Traffic Patterns
References	14 CFR part 91; FAA-H-8083-2, FAA-H-8083-25; AIM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with traffic patterns.
Knowledge	The applicant demonstrates understanding of:
PA.III.B.K1	Towered and nontowered airport operations.
PA.III.B.K2	Runway selection for the current conditions.
PA.III.B.K3	Right-of-way rules.
PA.III.B.K4	Use of automated weather and airport information.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.III.B.R1	Collision hazards, to include aircraft, terrain, obstacles, and wires.
PA.III.B.R2	Distractions, loss of situational awareness, and/or improper task management.
PA.III.B.R3	Wake turbulence and/or windshear.
Skills	The applicant demonstrates the ability to:
PA.III.B.S1	Properly identify and interpret airport/seaplane base runways, taxiways, markings, signs, and lighting.
PA.III.B.S2	Comply with recommended traffic pattern procedures.
PA.III.B.S3	Correct for wind drift to maintain the proper ground track.
PA.III.B.S4	Maintain orientation with the runway/landing area in use.
PA.III.B.S5	Maintain traffic pattern altitude, ± 100 feet, and the appropriate airspeed, ± 10 knots.
PA.III.B.S6	Maintain situational awareness and proper spacing from other aircraft in the traffic pattern.

IV. TAKEOFFS, LANDINGS, AND GO-AROUNDS

Task	A. Normal Takeoff and Climb
References	FAA-H-8083-2, FAA-H-8083-3, FAA-H-8083-23; POH/AFM; AIM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with a normal takeoff, climb operations, and rejected takeoff procedures. Note: <i>If a crosswind condition does not exist, the applicant's knowledge of crosswind elements must be evaluated through oral testing.</i>
Knowledge	The applicant demonstrates understanding of:
PA.IV.A.K1	Effects of atmospheric conditions, including wind, on takeoff and climb performance.
PA.IV.A.K2	V_X and V_Y .
PA.IV.A.K3	Appropriate airplane configuration.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.IV.A.R1	Selection of runway based on pilot capability, airplane performance and limitations, available distance, and wind.
PA.IV.A.R2	Effects of:
PA.IV.A.R2a	a. Crosswind
PA.IV.A.R2b	b. Windshear
PA.IV.A.R2c	c. Tailwind
PA.IV.A.R2d	d. Wake turbulence
PA.IV.A.R2e	e. Runway surface/condition
PA.IV.A.R3	Abnormal operations, to include planning for:
PA.IV.A.R3a	a. Rejected takeoff
PA.IV.A.R3b	b. Engine failure in takeoff/climb phase of flight
PA.IV.A.R4	Collision hazards, to include aircraft, vehicles, vessels, persons, wildlife, terrain, obstacles, and wires.
PA.IV.A.R5	Low altitude maneuvering including stall, spin, or CFIT.
PA.IV.A.R6	Distractions, loss of situational awareness, and/or improper task management.
Skills	The applicant demonstrates the ability to:
PA.IV.A.S1	Complete the appropriate checklist.
PA.IV.A.S2	Make radio calls as appropriate.
PA.IV.A.S3	Verify assigned/correct runway.
PA.IV.A.S4	Ascertain wind direction with or without visible wind direction indicators.
PA.IV.A.S5	Position the flight controls for the existing wind conditions.
PA.IV.A.S6	Clear the area; taxi into takeoff position and align the airplane on the runway centerline (ASEL, AMEL) or takeoff path (ASES, AMES).
PA.IV.A.S7	Confirm takeoff power and proper engine and flight instrument indications prior to rotation (ASEL, AMEL).
PA.IV.A.S8	Rotate and lift off at the recommended airspeed and accelerate to V_Y .
PA.IV.A.S9	Retract the water rudders, as appropriate, establish and maintain the most efficient planing/lift-off attitude, and correct for porpoising and skipping (ASES, AMES).
PA.IV.A.S10	Establish a pitch attitude to maintain the manufacturer's recommended speed or V_Y , +10/-5 knots.
PA.IV.A.S11	Configure the airplane in accordance with manufacturer's guidance.
PA.IV.A.S12	Maintain V_Y +10/-5 knots to a safe maneuvering altitude.
PA.IV.A.S13	Maintain directional control and proper wind-drift correction throughout takeoff and climb.
PA.IV.A.S14	Comply with noise abatement procedures.

IV. TAKEOFFS, LANDINGS, AND GO-AROUNDS (continued)

Task	B. Normal Approach and Landing
References	FAA-H-8083-2, FAA-H-8083-3, FAA-H-8083-23; POH/AFM; AIM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with a normal approach and landing with emphasis on proper use and coordination of flight controls. <i>Note: If a crosswind condition does not exist, the applicant's knowledge of crosswind elements must be evaluated through oral testing.</i>
Knowledge	The applicant demonstrates understanding of:
PA.IV.B.K1	A stabilized approach, to include energy management concepts.
PA.IV.B.K2	Effects of atmospheric conditions, including wind, on approach and landing performance.
PA.IV.B.K3	Wind correction techniques on approach and landing.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.IV.B.R1	Selection of runway based on pilot capability, airplane performance and limitations, available distance, and wind.
PA.IV.B.R2	Effects of:
PA.IV.B.R2a	a. Crosswind
PA.IV.B.R2b	b. Windshear
PA.IV.B.R2c	c. Tailwind
PA.IV.B.R2d	d. Wake turbulence
PA.IV.B.R2e	e. Runway surface/condition
PA.IV.B.R3	Planning for:
PA.IV.B.R3a	a. Go-around and rejected landing.
PA.IV.B.R3b	b. Land and hold short operations (LAHSO)
PA.IV.B.R4	Collision hazards, to include aircraft, vehicles, vessels, persons, wildlife, terrain, obstacles, and wires.
PA.IV.B.R5	Low altitude maneuvering including stall, spin, or CFIT.
PA.IV.B.R6	Distractions, loss of situational awareness, and/or improper task management.
Skills	The applicant demonstrates the ability to:
PA.IV.B.S1	Complete the appropriate checklist.
PA.IV.B.S2	Make radio calls as appropriate.
PA.IV.B.S3	Ensure the airplane is aligned with the correct/assigned runway or landing surface.
PA.IV.B.S4	Scan the runway or landing surface and the adjoining area for traffic and obstructions.
PA.IV.B.S5	Consider the wind conditions, landing surface, obstructions, and select a suitable touchdown point.
PA.IV.B.S6	Establish the recommended approach and landing configuration and airspeed, and adjust pitch attitude and power as required to maintain a stabilized approach.
PA.IV.B.S7	Maintain manufacturer's published approach airspeed or in its absence not more than 1.3 V_{SO} , +10/-5 knots with gust factor applied.
PA.IV.B.S8	Maintain crosswind correction and directional control throughout the approach and landing.
PA.IV.B.S9	Make smooth, timely, and correct control application during round out and touchdown.
PA.IV.B.S10	Touch down at a proper pitch attitude, within 400 feet beyond or on the specified point, with no side drift, and with the airplane's longitudinal axis aligned with and over the runway center/landing path.
PA.IV.B.S11	Execute a timely go-around if the approach cannot be made within the tolerances specified above or for any other condition that may result in an unsafe approach or landing.
PA.IV.B.S12	Utilize runway incursion avoidance procedures.

IV. TAKEOFFS, LANDINGS, AND GO-AROUNDS (continued)

Task	C. Soft-Field Takeoff and Climb (ASEL)
References	FAA-H-8083-2, FAA-H-8083-3; POH/AFM; AIM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with a soft-field takeoff, climb operations, and rejected takeoff procedures.
Knowledge	The applicant demonstrates understanding of:
PA.IV.C.K1	Effects of atmospheric conditions, including wind, on takeoff and climb performance.
PA.IV.C.K2	V_X and V_Y .
PA.IV.C.K3	Appropriate airplane configuration.
PA.IV.C.K4	Ground effect.
PA.IV.C.K5	Importance of weight transfer from wheels to wings.
PA.IV.C.K6	Left turning tendencies.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.IV.C.R1	Selection of runway based on pilot capability, airplane performance and limitations, available distance, and wind.
PA.IV.C.R2	Effects of:
PA.IV.C.R2a	a. Crosswind
PA.IV.C.R2b	b. Windshear
PA.IV.C.R2c	c. Tailwind
PA.IV.C.R2d	d. Wake turbulence
PA.IV.C.R2e	e. Runway surface/condition
PA.IV.C.R3	Abnormal operations, to include planning for:
PA.IV.C.R3a	a. Rejected takeoff
PA.IV.C.R3b	b. Engine failure in takeoff/climb phase of flight
PA.IV.C.R4	Collision hazards, to include aircraft, vehicles, persons, wildlife, terrain, obstacles, and wires.
PA.IV.C.R5	Low altitude maneuvering including stall, spin, or CFIT.
PA.IV.C.R6	Distractions, loss of situational awareness, and/or improper task management.
Skills	The applicant demonstrates the ability to:
PA.IV.C.S1	Complete the appropriate checklist.
PA.IV.C.S2	Make radio calls as appropriate.
PA.IV.C.S3	Verify assigned/correct runway.
PA.IV.C.S4	Ascertain wind direction with or without visible wind direction indicators.
PA.IV.C.S5	Position the flight controls for the existing wind conditions.
PA.IV.C.S6	Clear the area, maintain necessary flight control inputs, taxi into takeoff position and align the airplane on the runway centerline without stopping, while advancing the throttle smoothly to takeoff power.
PA.IV.C.S7	Confirm takeoff power and proper engine and flight instrument indications.
PA.IV.C.S8	Establish and maintain a pitch attitude that will transfer the weight of the airplane from the wheels to the wings as rapidly as possible.
PA.IV.C.S9	Lift off at the lowest possible airspeed and remain in ground effect while accelerating to V_X or V_Y , as appropriate.
PA.IV.C.S10	Establish a pitch attitude for V_X or V_Y , as appropriate, and maintain selected airspeed +10/-5 knots during the climb.
PA.IV.C.S11	Configure the airplane after a positive rate of climb has been verified or in accordance with airplane manufacturer's instructions.
PA.IV.C.S12	Maintain V_X or V_Y , as appropriate, +10/-5 knots to a safe maneuvering altitude.
PA.IV.C.S13	Maintain directional control and proper wind-drift correction throughout takeoff and climb.
PA.IV.C.S14	Comply with noise abatement procedures.

IV. TAKEOFFS, LANDINGS, AND GO-AROUNDS (continued)

Task	<i>D. Soft-Field Approach and Landing (ASEL)</i>
References	FAA-H-8083-2, FAA-H-8083-3; POH/AFM; AIM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with a soft-field approach and landing with emphasis on proper use and coordination of flight controls.
Knowledge	The applicant demonstrates understanding of:
<i>PA.IV.D.K1</i>	A stabilized approach, to include energy management concepts.
<i>PA.IV.D.K2</i>	Effects of atmospheric conditions, including wind, on approach and landing performance.
<i>PA.IV.D.K3</i>	Wind correction techniques on approach and landing.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.IV.D.R1</i>	Selection of runway based on pilot capability, airplane performance and limitations, available distance, and wind.
<i>PA.IV.D.R2</i>	Effects of:
<i>PA.IV.D.R2a</i>	a. Crosswind
<i>PA.IV.D.R2b</i>	b. Windshear
<i>PA.IV.D.R2c</i>	c. Tailwind
<i>PA.IV.D.R2d</i>	d. Wake turbulence
<i>PA.IV.D.R2e</i>	e. Runway surface/condition
<i>PA.IV.D.R3</i>	Planning for:
<i>PA.IV.D.R3a</i>	a. Go-around and rejected landing
<i>PA.IV.D.R3b</i>	b. Land and hold short operations (LAHSO)
<i>PA.IV.D.R4</i>	Collision hazards, to include aircraft, vehicles, persons, wildlife, terrain, obstacles, and wires.
<i>PA.IV.D.R5</i>	Low altitude maneuvering including stall, spin, or CFIT.
<i>PA.IV.D.R6</i>	Distractions, loss of situational awareness, and/or improper task management.
Skills	The applicant demonstrates the ability to:
<i>PA.IV.D.S1</i>	Complete the appropriate checklist.
<i>PA.IV.D.S2</i>	Make radio calls as appropriate.
<i>PA.IV.D.S3</i>	Ensure the airplane is aligned with the correct/assigned runway.
<i>PA.IV.D.S4</i>	Scan the landing runway and adjoining area for traffic and obstructions.
<i>PA.IV.D.S5</i>	Consider the wind conditions, landing surface, obstructions, and select a suitable touchdown point.
<i>PA.IV.D.S6</i>	Establish the recommended approach and landing configuration and airspeed, and adjust pitch attitude and power as required to maintain a stabilized approach.
<i>PA.IV.D.S7</i>	Maintain manufacturer's published airspeed or in its absence not more than 1.3 V_{SO} , +10/-5 knots with gust factor applied.
<i>PA.IV.D.S8</i>	Maintain crosswind correction and directional control throughout the approach and landing.
<i>PA.IV.D.S9</i>	Make smooth, timely, and correct control inputs during the round out and touchdown, and, for tricycle gear airplanes, keep the nose wheel off the surface until loss of elevator effectiveness.
<i>PA.IV.D.S10</i>	Touch down at a proper pitch attitude with minimum sink rate, no side drift, and with the airplane's longitudinal axis aligned with the center of the runway.
<i>PA.IV.D.S11</i>	Maintain elevator as recommended by manufacturer during rollout and exit the "soft" area at a speed that would preclude sinking into the surface.
<i>PA.IV.D.S12</i>	Execute a timely go-around if the approach cannot be made within the tolerances specified above or for any other condition that may result in an unsafe approach or landing.
<i>PA.IV.D.S13</i>	Maintain proper position of the flight controls and sufficient speed to taxi while on the soft surface.

IV. TAKEOFFS, LANDINGS, AND GO-AROUNDS (continued)

Task	<i>E. Short-Field Takeoff and Maximum Performance Climb (ASEL, AMEL)</i>
References	FAA-H-8083-2, FAA-H-8083-3; POH/AFM; AIM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with a short-field takeoff, maximum performance climb operations, and rejected takeoff procedures.
Knowledge	The applicant demonstrates understanding of:
<i>PA.IV.E.K1</i>	Effects of atmospheric conditions, including wind, on takeoff and climb performance.
<i>PA.IV.E.K2</i>	V_X and V_Y .
<i>PA.IV.E.K3</i>	Appropriate airplane configuration.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.IV.E.R1</i>	Selection of runway based on pilot capability, airplane performance and limitations, available distance, and wind.
<i>PA.IV.E.R2</i>	Effects of:
<i>PA.IV.E.R2a</i>	a. Crosswind
<i>PA.IV.E.R2b</i>	b. Windshear
<i>PA.IV.E.R2c</i>	c. Tailwind
<i>PA.IV.E.R2d</i>	d. Wake turbulence
<i>PA.IV.E.R2e</i>	e. Runway surface/condition
<i>PA.IV.E.R3</i>	Abnormal operations, to include planning for:
<i>PA.IV.E.R3a</i>	a. Rejected takeoff
<i>PA.IV.E.R3b</i>	b. Engine failure in takeoff/climb phase of flight
<i>PA.IV.E.R4</i>	Collision hazards, to include aircraft, vehicles, persons, wildlife, terrain, obstacles, and wires.
<i>PA.IV.E.R5</i>	Low altitude maneuvering including stall, spin, or CFIT.
<i>PA.IV.E.R6</i>	Distractions, loss of situational awareness, and/or improper task management.
Skills	The applicant demonstrates the ability to:
<i>PA.IV.E.S1</i>	Complete the appropriate checklist.
<i>PA.IV.E.S2</i>	Make radio calls as appropriate.
<i>PA.IV.E.S3</i>	Verify assigned/correct runway.
<i>PA.IV.E.S4</i>	Ascertain wind direction with or without visible wind direction indicators.
<i>PA.IV.E.S5</i>	Position the flight controls for the existing wind conditions.
<i>PA.IV.E.S6</i>	Clear the area, taxi into takeoff position and align the airplane on the runway centerline utilizing maximum available takeoff area.
<i>PA.IV.E.S7</i>	Apply brakes while setting engine power to achieve maximum performance.
<i>PA.IV.E.S8</i>	Confirm takeoff power prior to brake release and verify proper engine and flight instrument indications prior to rotation.
<i>PA.IV.E.S9</i>	Rotate and lift off at the recommended airspeed and accelerate to the recommended obstacle clearance airspeed or V_X , +10/-5 knots.
<i>PA.IV.E.S10</i>	Establish a pitch attitude that will maintain the recommended obstacle clearance airspeed or V_X , +10/-5 knots until the obstacle is cleared or until the airplane is 50 feet above the surface.
<i>PA.IV.E.S11</i>	After clearing the obstacle, establish pitch attitude for V_Y , and accelerate to and maintain V_Y +10/-5 knots during the climb.
<i>PA.IV.E.S12</i>	Configure the airplane in accordance with the manufacturer's guidance after a positive rate of climb has been verified.
<i>PA.IV.E.S13</i>	Maintain V_Y +10/-5 knots to a safe maneuvering altitude.
<i>PA.IV.E.S14</i>	Maintain directional control and proper wind-drift correction throughout takeoff and climb.
<i>PA.IV.E.S15</i>	Comply with noise abatement procedures.

IV. TAKEOFFS, LANDINGS, AND GO-AROUNDS (continued)

Task	F. Short-Field Approach and Landing (ASEL, AMEL)
References	FAA-H-8083-2, FAA-H-8083-3; POH/AFM; AIM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with a short-field approach and landing with emphasis on proper use and coordination of flight controls.
Knowledge	The applicant demonstrates understanding of:
PA.IV.F.K1	A stabilized approach, to include energy management concepts.
PA.IV.F.K2	Effects of atmospheric conditions, including wind, on approach and landing performance.
PA.IV.F.K3	Wind correction techniques on approach and landing.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.IV.F.R1	Selection of runway based on pilot capability, airplane performance and limitations, available distance, and wind.
PA.IV.F.R2	Effects of:
PA.IV.F.R2a	a. Crosswind
PA.IV.F.R2b	b. Windshear
PA.IV.F.R2c	c. Tailwind
PA.IV.F.R2d	d. Wake turbulence
PA.IV.F.R2e	e. Runway surface/condition
PA.IV.F.R3	Planning for:
PA.IV.F.R3a	a. Go-around and rejected landing
PA.IV.F.R3b	b. Land and hold short operations (LAHSO)
PA.IV.F.R4	Collision hazards, to include aircraft, vehicles, persons, wildlife, terrain, obstacles, and wires.
PA.IV.F.R5	Low altitude maneuvering including stall, spin, or CFIT.
PA.IV.F.R6	Distractions, loss of situational awareness, and/or improper task management.
Skills	The applicant demonstrates the ability to:
PA.IV.F.S1	Complete the appropriate checklist.
PA.IV.F.S2	Make radio calls as appropriate.
PA.IV.F.S3	Ensure the airplane is aligned with the correct/assigned runway.
PA.IV.F.S4	Scan the landing runway and adjoining area for traffic and obstructions.
PA.IV.F.S5	Consider the wind conditions, landing surface, obstructions, and select a suitable touchdown point.
PA.IV.F.S6	Establish the recommended approach and landing configuration and airspeed, and adjust pitch attitude and power as required to maintain a stabilized approach.
PA.IV.F.S7	Maintain manufacturer's published airspeed or in its absence not more than 1.3 V _{SO} , +10/-5 knots with gust factor applied.
PA.IV.F.S8	Maintain crosswind correction and directional control throughout the approach and landing.
PA.IV.F.S9	Make smooth, timely, and correct control application during the round out and touchdown.
PA.IV.F.S10	Touch down at a proper pitch attitude, within 200 feet beyond or on the specified point, threshold markings or runway numbers, with no side drift, minimum float, and with the airplane's longitudinal axis aligned with and over runway centerline.
PA.IV.F.S11	Use manufacturer's recommended procedures for airplane configuration and braking.
PA.IV.F.S12	Execute a timely go-around if the approach cannot be made within the tolerances specified above or for any other condition that may result in an unsafe approach or landing.
PA.IV.F.S13	Utilize runway incursion avoidance procedures.

IV. TAKEOFFS, LANDINGS, AND GO-AROUNDS (continued)

TASK(s) REMOVED –	<i>G - L Water = Glassy, Rough, Confined Area (ASES, AMES)</i>
Task	<i>M. Forward Slip to a Landing (ASEL, ASES)</i>
References	FAA-H-8083-2, FAA-H-8083-3; POH/AFM; AIM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with a forward slip to a landing.
Knowledge	The applicant demonstrates understanding of:
<i>PA.IV.M.K1</i>	Concepts of energy management during a forward slip approach.
<i>PA.IV.M.K2</i>	Effects of atmospheric conditions, including wind, on approach and landing performance.
<i>PA.IV.M.K3</i>	Wind correction techniques during forward slip.
<i>PA.IV.M.K4</i>	When and why a forward slip approach is used during an approach.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.IV.M.R1</i>	Selection of runway or approach path and touchdown area based on pilot capability, airplane performance and limitations, available distance, and wind.
<i>PA.IV.M.R2</i>	Effects of:
<i>PA.IV.M.R2a</i>	a. Crosswind
<i>PA.IV.M.R2b</i>	b. Windshear
<i>PA.IV.M.R2c</i>	c. Tailwind
<i>PA.IV.M.R2d</i>	d. Wake turbulence
<i>PA.IV.M.R2e</i>	e. Runway surface/condition
<i>PA.IV.M.R3</i>	Planning for go-around and rejected landing.
<i>PA.IV.M.R3a</i>	a. Rejected takeoff
<i>PA.IV.M.R3b</i>	b. Engine failure in takeoff/climb phase of flight
<i>PA.IV.M.R4</i>	Collision hazards, to include aircraft, vehicles, vessels, persons, wildlife, terrain, obstacles, and wires.
<i>PA.IV.M.R5</i>	Low altitude maneuvering including stall, spin, or CFIT.
<i>PA.IV.M.R6</i>	Distractions, loss of situational awareness, and/or improper task management.
<i>PA.IV.M.R7</i>	Forward slip operations, including fuel flowage, tail stalls with flaps, and lack of airspeed control.
<i>PA.IV.M.R8</i>	Surface contact with the airplane's longitudinal axis misaligned.
<i>PA.IV.M.R9</i>	Unstable approach.
Skills	The applicant demonstrates the ability to:
<i>PA.IV.M.S1</i>	Complete the appropriate checklist.
<i>PA.IV.M.S2</i>	Make radio calls as appropriate.
<i>PA.IV.M.S3</i>	Plan and follow a flightpath to the selected landing area considering altitude, wind, terrain, and obstructions.
<i>PA.IV.M.S4</i>	Select the most suitable touchdown point based on wind, landing surface, obstructions, and airplane limitations.
<i>PA.IV.M.S5</i>	Position airplane on downwind leg, parallel to landing runway.
<i>PA.IV.M.S6</i>	Configure the airplane correctly.
<i>PA.IV.M.S7</i>	As necessary, correlate crosswind with direction of forward slip and transition to side slip before touchdown.
<i>PA.IV.M.S8</i>	Touch down at a proper pitch attitude, within 400 feet beyond or on the specified point, with no side drift, and with the airplane's longitudinal axis aligned with and over the runway center/landing path.
<i>PA.IV.M.S9</i>	Maintain a ground track aligned with the runway center/landing path.

IV. TAKEOFFS, LANDINGS, AND GO-AROUNDS (continued)

Task	<i>N. Go-Around/Rejected Landing</i>
References	FAA-H-8083-3, FAA-H-8083-23; POH/AFM; AIM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with a go-around/rejected landing with emphasis on factors that contribute to landing conditions that may require a go-around.
Knowledge	The applicant demonstrates understanding of:
<i>PA.IV.N.K1</i>	A stabilized approach, to include energy management concepts.
<i>PA.IV.N.K2</i>	Effects of atmospheric conditions, including wind and density altitude on a go-around or rejected landing.
<i>PA.IV.N.K3</i>	Wind correction techniques on takeoff/departure and approach/landing.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.IV.N.R1</i>	Delayed recognition of the need for a go-around/rejected landing.
<i>PA.IV.N.R2</i>	Delayed performance of a go-around at low altitude.
<i>PA.IV.N.R3</i>	Improper application of power.
<i>PA.IV.N.R4</i>	Improper airplane configuration.
<i>PA.IV.N.R5</i>	Collision hazards, to include aircraft, vehicles, vessels, persons, wildlife, terrain, obstacles, and wires.
<i>PA.IV.N.R6</i>	Low altitude maneuvering including stall, spin, or CFIT.
<i>PA.IV.N.R7</i>	Distractions, loss of situational awareness, and/or improper task management.
Skills	The applicant demonstrates the ability to:
<i>PA.IV.N.S1</i>	Complete the appropriate checklist.
<i>PA.IV.N.S2</i>	Make radio calls as appropriate.
<i>PA.IV.N.S3</i>	Make a timely decision to discontinue the approach to landing.
<i>PA.IV.N.S4</i>	Apply takeoff power immediately and transition to climb pitch attitude for V_X or V_Y as appropriate +10/-5 knots.
<i>PA.IV.N.S5</i>	Configure the airplane after a positive rate of climb has been verified or in accordance with airplane manufacturer's instructions.
<i>PA.IV.N.S6</i>	Maneuver to the side of the runway/landing area when necessary to clear and avoid conflicting traffic.
<i>PA.IV.N.S7</i>	Maintain V_Y +10/-5 knots to a safe maneuvering altitude.
<i>PA.IV.N.S8</i>	Maintain directional control and proper wind-drift correction throughout the climb.

V. PERFORMANCE AND GROUND REFERENCE MANEUVERS

Task	A. Steep Turns
References	FAA-H-8083-2, FAA-H-8083-3; POH/AFM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with steep turns. Note: See Appendix 7: Aircraft, Equipment, and Operational Requirements & Limitations .
Knowledge	The applicant demonstrates understanding of:
<i>PA.V.A.K1</i>	Purpose of steep turns.
<i>PA.V.A.K2</i>	Aerodynamics associated with steep turns, to include:
<i>PA.V.A.K2a</i>	a. Coordinated and uncoordinated flight
<i>PA.V.A.K2b</i>	b. Overbanking tendencies
<i>PA.V.A.K2c</i>	c. Maneuvering speed, including the impact of weight changes
<i>PA.V.A.K2d</i>	d. Load factor and accelerated stalls
<i>PA.V.A.K2e</i>	e. Rate and radius of turn
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.V.A.R1</i>	Failure to divide attention between airplane control and orientation.
<i>PA.V.A.R2</i>	Collision hazards, to include aircraft, terrain, obstacles, and wires.
<i>PA.V.A.R3</i>	Low altitude maneuvering including stall, spin, or CFIT.
<i>PA.V.A.R4</i>	Distractions, loss of situational awareness, and/or improper task management.
<i>PA.V.A.R5</i>	Failure to maintain coordinated flight.
Skills	The applicant demonstrates the ability to:
<i>PA.V.A.S1</i>	Clear the area.
<i>PA.V.A.S2</i>	Establish the manufacturer's recommended airspeed or; or if one is not available, a safe airspeed not to exceed V_A .
<i>PA.V.A.S3</i>	Roll into a coordinated 360° steep turn with approximately a 45° bank.
<i>PA.V.A.S4</i>	Perform the Task in the opposite direction, as specified by evaluator.
<i>PA.V.A.S5</i>	Maintain the entry altitude ± 100 feet, airspeed ± 10 knots, bank $\pm 5^\circ$, and roll out on the entry heading $\pm 10^\circ$.

V. PERFORMANCE AND GROUND REFERENCE MANEUVERS (continued)

Task	B. Ground Reference Maneuvers
References	14 CFR part 61; FAA-H-8083-2, FAA-H-8083-3
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with ground reference maneuvering which may include a rectangular course, S-turns, and turns around a point. Note: See Appendix 7: Aircraft, Equipment, and Operational Requirements & Limitations .
Knowledge	The applicant demonstrates understanding of:
PA.V.B.K1	Purpose of ground reference maneuvers.
PA.V.B.K2	Effects of wind on ground track and relation to a ground reference point.
PA.V.B.K3	Effects of bank angle and groundspeed on rate and radius of turn.
PA.V.B.K4	Relationship of rectangular course to airport traffic pattern.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.V.B.R1	Failure to divide attention between airplane control and orientation.
PA.V.B.R2	Collision hazards, to include aircraft, terrain, obstacles, and wires.
PA.V.B.R3	Low altitude maneuvering including stall, spin, or CFIT.
PA.V.B.R4	Distractions, loss of situational awareness, and/or improper task management.
PA.V.B.R5	Failure to maintain coordinated flight.
Skills	The applicant demonstrates the ability to:
PA.V.B.S1	Clear the area.
PA.V.B.S2	Select a suitable ground reference area, line, or point as appropriate.
PA.V.B.S3	Plan the maneuver: Note: <i>The evaluator must select at least one maneuver for the applicant to demonstrate.</i>
PA.V.B.S3a	a. Rectangular course: enter a left or right pattern, 600 to 1,000 feet above ground level (AGL) at an appropriate distance from the selected reference area, 45° to the downwind leg
PA.V.B.S3b	b. S-turns: enter perpendicular to the selected reference line, 600 to 1,000 feet AGL at an appropriate distance from the selected reference area
PA.V.B.S3c	c. Turns around a point: enter at an appropriate distance from the reference point, 600 to 1,000 feet AGL at an appropriate distance from the selected reference area
PA.V.B.S4	Apply adequate wind-drift correction during straight and turning flight to maintain a constant ground track around a rectangular reference area, or to maintain a constant radius turn on each side of a selected reference line or point.
PA.V.B.S5	If performing S-Turns, reverse the turn directly over the selected reference line; if performing turns around a point, complete turns in either direction, as specified by the evaluator.
PA.V.B.S6	Divide attention between airplane control, traffic avoidance and the ground track while maintaining coordinated flight.
PA.V.B.S7	Maintain altitude ± 100 feet; maintain airspeed ± 10 knots.

VI. NAVIGATION

Task	A. Pilotage and Dead Reckoning
References	14 CFR part 61; FAA-H-8083-2, FAA-H-8083-25; Navigation Charts
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with pilotage and dead reckoning.
Knowledge	The applicant demonstrates understanding of:
<i>PA.VI.A.K1</i>	Pilotage and dead reckoning.
<i>PA.VI.A.K2</i>	Magnetic compass errors.
<i>PA.VI.A.K3</i>	Topography.
<i>PA.VI.A.K4</i>	Selection of appropriate:
<i>PA.VI.A.K4a</i>	a. Route
<i>PA.VI.A.K4b</i>	b. Altitude(s)
<i>PA.VI.A.K4c</i>	c. Checkpoints
<i>PA.VI.A.K5</i>	Plotting a course, to include:
<i>PA.VI.A.K5a</i>	a. Determining heading, speed, and course
<i>PA.VI.A.K5b</i>	b. Wind correction angle
<i>PA.VI.A.K5c</i>	c. Estimating time, speed, and distance
<i>PA.VI.A.K5d</i>	d. True airspeed and density altitude
<i>PA.VI.A.K6</i>	Power setting selection.
<i>PA.VI.A.K7</i>	Planned versus actual flight plan calculations and required corrections.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.VI.A.R1</i>	Collision hazards, to include aircraft, terrain, obstacles, and wires.
<i>PA.VI.A.R2</i>	Distractions, loss of situational awareness, and/or improper task management.
Skills	The applicant demonstrates the ability to:
<i>PA.VI.A.S1</i>	Prepare and use a flight log.
<i>PA.VI.A.S2</i>	Navigate by pilotage.
<i>PA.VI.A.S3</i>	Navigate by means of pre-computed headings, groundspeeds, and elapsed time.
<i>PA.VI.A.S4</i>	Demonstrate use of the magnetic direction indicator in navigation, to include turns to headings.
<i>PA.VI.A.S5</i>	Verify position within three nautical miles of the flight-planned route.
<i>PA.VI.A.S6</i>	Arrive at the en route checkpoints within five minutes of the initial or revised estimated time of arrival (ETA) and provide a destination estimate.
<i>PA.VI.A.S7</i>	Maintain the appropriate altitude, ± 200 feet and heading, $\pm 15^\circ$.

VI. NAVIGATION (continued)

Task	B. Navigation Systems and Radar Services
References	FAA-H-8083-2, FAA-H-8083-3, FAA-H-8083-6, FAA-H-8083-25; AIM Note: <i>The evaluator should reference the manufacturer's equipment supplement(s) as necessary.</i>
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with navigation systems and radar services.
Knowledge	The applicant demonstrates understanding of:
<i>PA.VI.B.K1</i>	Ground-based navigation (orientation, course determination, equipment, tests, and regulations).
<i>PA.VI.B.K2</i>	Satellite-based navigation (e.g., equipment, regulations, database considerations, and limitations of satellite navigation).
<i>PA.VI.B.K3</i>	Radar assistance to VFR aircraft (e.g., operations, equipment, available services, traffic advisories).
<i>PA.VI.B.K4</i>	Transponder (Mode(s) A, C, and S).
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.VI.B.R1</i>	Failure to manage automated navigation and autoflight systems.
<i>PA.VI.B.R2</i>	Distractions, loss of situational awareness, and/or improper task management.
<i>PA.VI.B.R3</i>	Limitations of the navigation system in use.
<i>PA.VI.B.R4</i>	Loss of a navigation signal.
Skills	The applicant demonstrates the ability to:
<i>PA.VI.B.S1</i>	Use an airborne electronic navigation system.
<i>PA.VI.B.S2</i>	Determine the airplane's position using the navigation system.
<i>PA.VI.B.S3</i>	Intercept and track a given course, radial, or bearing, as appropriate.
<i>PA.VI.B.S4</i>	Recognize and describe the indication of station or waypoint passage, if appropriate.
<i>PA.VI.B.S5</i>	Recognize signal loss or interference and take appropriate action, if applicable.
<i>PA.VI.B.S6</i>	Use proper communication procedures when utilizing radar services.
<i>PA.VI.B.S7</i>	Maintain the appropriate altitude, ± 200 feet, and heading $\pm 15^\circ$.

VI. NAVIGATION (continued)

Task	C. Diversion
References	FAA-H-8083-2, FAA-H-8083-25; AIM; Navigation Charts
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with diversion.
Knowledge	The applicant demonstrates understanding of:
PA.VI.C.K1	Selecting an alternate destination.
PA.VI.C.K2	Situations that require deviations from flight plan and/or ATC instructions.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.VI.C.R1	Collision hazards, to include aircraft, terrain, obstacles, and wires.
PA.VI.C.R2	Distractions, loss of situational awareness, and/or improper task management.
PA.VI.C.R3	Failure to make a timely decision to divert.
PA.VI.C.R4	Failure to select an appropriate airport.
PA.VI.C.R5	Failure to utilize all available resources (e.g., automation, ATC, and flight deck planning aids).
Skills	The applicant demonstrates the ability to:
PA.VI.C.S1	Select a suitable airport and route for diversion.
PA.VI.C.S2	Make a reasonable estimate of heading, groundspeed, arrival time, and fuel consumption to the divert airport.
PA.VI.C.S3	Maintain the appropriate altitude, ± 200 feet and heading, $\pm 15^\circ$.
PA.VI.C.S4	Update/interpret weather in flight.
PA.VI.C.S5	Explain and use flight deck displays of digital weather and aeronautical information, as applicable.

Task	D. Lost Procedures
References	FAA-H-8083-2, FAA-H-8083-25; AIM; Navigation Charts
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with lost procedures and taking appropriate steps to achieve a satisfactory outcome if lost.
Knowledge	The applicant demonstrates understanding of:
PA.VI.D.K1	Methods to determine position.
PA.VI.D.K2	Assistance available if lost (e.g., radar services, communication procedures).
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.VI.D.R1	Collision hazards, to include aircraft, terrain, obstacles, and wires.
PA.VI.D.R2	Distractions, loss of situational awareness, and/or improper task management.
PA.VI.D.R3	Failure to record times over waypoints.
PA.VI.D.R4	Failure to seek assistance or declare an emergency in a deteriorating situation.
Skills	The applicant demonstrates the ability to:
PA.VI.D.S1	Use an appropriate method to determine position.
PA.VI.D.S2	Maintain an appropriate heading and climb as necessary.
PA.VI.D.S3	Identify prominent landmarks.
PA.VI.D.S4	Use navigation systems/facilities and/or contact an ATC facility for assistance.

VII. SLOW FLIGHT AND STALLS

Task	A. Maneuvering During Slow Flight
References	FAA-H-8083-2, FAA-H-8083-3; POH/AFM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with maneuvering during slow flight. Note: See Appendix 6: Safety of Flight and Appendix 7: Aircraft, Equipment, and Operational Requirements & Limitations .
Knowledge	The applicant demonstrates understanding of:
<i>PA.VII.A.K1</i>	Aerodynamics associated with slow flight in various airplane configurations, to include the relationship between angle of attack, airspeed, load factor, power setting, airplane weight and center of gravity, airplane attitude, and yaw effects.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.VII.A.R1</i>	Inadvertent slow flight and flight with a stall warning, which could lead to loss of control.
<i>PA.VII.A.R2</i>	Range and limitations of stall warning indicators (e.g., airplane buffet, stall horn, etc.).
<i>PA.VII.A.R3</i>	Failure to maintain coordinated flight.
<i>PA.VII.A.R4</i>	Effect of environmental elements on airplane performance (e.g., turbulence, microbursts, and high-density altitude).
<i>PA.VII.A.R5</i>	Collision hazards, to include aircraft, terrain, obstacles, and wires.
<i>PA.VII.A.R6</i>	Distractions, loss of situational awareness, and/or improper task management.
Skills	The applicant demonstrates the ability to:
<i>PA.VII.A.S1</i>	Clear the area.
<i>PA.VII.A.S2</i>	Select an entry altitude that will allow the Task to be completed no lower than 1,500 feet AGL (ASEL, ASES) or 3,000 feet AGL (AMEL, AMES).
<i>PA.VII.A.S3</i>	Establish and maintain an airspeed at which any further increase in angle of attack, increase in load factor, or reduction in power, would result in a stall warning (e.g., airplane buffet, stall horn, etc.).
<i>PA.VII.A.S4</i>	Accomplish coordinated straight-and-level flight, turns, climbs, and descents with the airplane configured as specified by the evaluator without a stall warning (e.g., airplane buffet, stall horn, etc.).
<i>PA.VII.A.S5</i>	Maintain the specified altitude, ± 100 feet; specified heading, $\pm 10^\circ$; airspeed, $+10/-0$ knots; and specified angle of bank, $\pm 10^\circ$.

VII. SLOW FLIGHT AND STALLS (continued)

Task	B. Power-Off Stalls
References	FAA-H-8083-2, FAA-H-8083-3; AC 61-67; POH/AFM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with power-off stalls. Note: See Appendix 7: Aircraft, Equipment, and Operational Requirements & Limitations .
Knowledge	The applicant demonstrates understanding of:
<i>PA.VII.B.K1</i>	Aerodynamics associated with stalls in various airplane configurations, to include the relationship between angle of attack, airspeed, load factor, power setting, airplane weight and center of gravity, airplane attitude, and yaw effects.
<i>PA.VII.B.K2</i>	Stall characteristics (i.e., airplane design) and impending stall and full stall indications (i.e., how to recognize by sight, sound, or feel).
<i>PA.VII.B.K3</i>	Factors and situations that can lead to a power-off stall and actions that can be taken to prevent it.
<i>PA.VII.B.K4</i>	Fundamentals of stall recovery.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.VII.B.R1</i>	Factors and situations that could lead to an inadvertent power-off stall, spin, and loss of control.
<i>PA.VII.B.R2</i>	Range and limitations of stall warning indicators (e.g., airplane buffet, stall horn, etc.).
<i>PA.VII.B.R3</i>	Failure to recognize and recover at the stall warning during normal operations.
<i>PA.VII.B.R4</i>	Improper stall recovery procedure.
<i>PA.VII.B.R5</i>	Secondary stalls, accelerated stalls, and cross-control stalls.
<i>PA.VII.B.R6</i>	Effect of environmental elements on airplane performance related to power-off stalls (e.g., turbulence, microbursts, and high-density altitude).
<i>PA.VII.B.R7</i>	Collision hazards, to include airplane, terrain, obstacles, and wires.
<i>PA.VII.B.R8</i>	Distractions, loss of situational awareness, and/or improper task management.
Skills	The applicant demonstrates the ability to:
<i>PA.VII.B.S1</i>	Clear the area.
<i>PA.VII.B.S2</i>	Select an entry altitude that will allow the Task to be completed no lower than 1,500 feet AGL (ASEL, ASES) or 3,000 feet AGL (AMEL, AMES).
<i>PA.VII.B.S3</i>	Configure the airplane in the approach or landing configuration, as specified by the evaluator, and maintain coordinated flight throughout the maneuver.
<i>PA.VII.B.S4</i>	Establish a stabilized descent.
<i>PA.VII.B.S5</i>	Transition smoothly from the approach or landing attitude to a pitch attitude that will induce a stall.
<i>PA.VII.B.S6</i>	Maintain a specified heading, $\pm 10^\circ$ if in straight flight; maintain a specified angle of bank not to exceed 20° , $\pm 10^\circ$, if in turning flight, while inducing the stall.
<i>PA.VII.B.S7</i>	Acknowledge cues of the impending stall and then recover promptly after a full stall occurs.
<i>PA.VII.B.S8</i>	Execute a stall recovery in accordance with procedures set forth in the POH/AFM.
<i>PA.VII.B.S9</i>	Configure the airplane as recommended by the manufacturer, and accelerate to V_X or V_Y .
<i>PA.VII.B.S10</i>	Return to the altitude, heading, and airspeed specified by the evaluator.

VII. SLOW FLIGHT AND STALLS (continued)

Task	C. Power-On Stalls
References	FAA-H-8083-2, FAA-H-8083-3; AC 61-67; POH/AFM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with power-on stalls. Note: See Appendix 6: Safety of Flight and Appendix 7: Aircraft, Equipment, and Operational Requirements & Limitations .
Knowledge	The applicant demonstrates understanding of:
<i>PA.VII.C.K1</i>	Aerodynamics associated with stalls in various airplane configurations, to include the relationship between angle of attack, airspeed, load factor, power setting, airplane weight and center of gravity, airplane attitude, and yaw effects.
<i>PA.VII.C.K2</i>	Stall characteristics (i.e., airplane design) and impending stall and full stall indications (i.e., how to recognize by sight, sound, or feel).
<i>PA.VII.C.K3</i>	Factors and situations that can lead to a power-on stall and actions that can be taken to prevent it.
<i>PA.VII.C.K4</i>	Fundamentals of stall recovery.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.VII.C.R1</i>	Factors and situations that could lead to an inadvertent power-on stall, spin, and loss of control.
<i>PA.VII.C.R2</i>	Range and limitations of stall warning indicators (e.g., airplane buffet, stall horn, etc.).
<i>PA.VII.C.R3</i>	Failure to recognize and recover at the stall warning during normal operations.
<i>PA.VII.C.R4</i>	Improper stall recovery procedure.
<i>PA.VII.C.R5</i>	Secondary stalls, accelerated stalls, elevator trim stalls, and cross-control stalls.
<i>PA.VII.C.R6</i>	Effect of environmental elements on airplane performance related to power-on stalls (e.g., turbulence, microbursts, and high-density altitude).
<i>PA.VII.C.R7</i>	Collision hazards, to include aircraft, terrain, obstacles, and wires.
<i>PA.VII.C.R8</i>	Distractions, loss of situational awareness, and/or improper task management.
Skills	The applicant demonstrates the ability to:
<i>PA.VII.C.S1</i>	Clear the area.
<i>PA.VII.C.S2</i>	Select an entry altitude that will allow the Task to be completed no lower than 1,500 feet AGL (ASEL, ASES) or 3,000 feet AGL (AMEL, AMES).
<i>PA.VII.C.S3</i>	Establish the takeoff, departure, or cruise configuration, as specified by the evaluator, and maintain coordinated flight throughout the maneuver.
<i>PA.VII.C.S4</i>	Set power (as assigned by the evaluator) to no less than 65 percent available power.
<i>PA.VII.C.S5</i>	Transition smoothly from the takeoff or departure attitude to the pitch attitude that will induce a stall.
<i>PA.VII.C.S6</i>	Maintain a specified heading, $\pm 10^\circ$ if in straight flight; maintain a specified angle of bank not to exceed 20° , $\pm 10^\circ$ if in turning flight, while inducing the stall.
<i>PA.VII.C.S7</i>	Acknowledge cues of the impending stall and then recover promptly after a full stall occurs.
<i>PA.VII.C.S8</i>	Execute a stall recovery in accordance with procedures set forth in the POH/AFM.
<i>PA.VII.C.S9</i>	Configure the airplane as recommended by the manufacturer, and accelerate to V_X or V_Y .
<i>PA.VII.C.S10</i>	Return to the altitude, heading, and airspeed specified by the evaluator.

VII. SLOW FLIGHT AND STALLS (continued)

Task	<i>D. Spin Awareness</i>
References	FAA-H-8083-2, FAA-H-8083-3; AC 61-67; POH/AFM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with spins, flight situations where unintentional spins may occur and procedures for recovery from unintentional spins.
Knowledge	The applicant demonstrates understanding of:
<i>PA.VII.D.K1</i>	Aerodynamics associated with spins in various airplane configurations, to include the relationship between angle of attack, airspeed, load factor, power setting, aircraft weight and center of gravity, aircraft attitude, and yaw effects.
<i>PA.VII.D.K2</i>	What causes a spin and how to identify the entry, incipient, and developed phases of a spin.
<i>PA.VII.D.K3</i>	Spin recovery procedure.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.VII.D.R1</i>	Factors and situations that could lead to inadvertent spin and loss of control.
<i>PA.VII.D.R2</i>	Range and limitations of stall warning indicators (e.g., airplane buffet, stall horn, etc.).
<i>PA.VII.D.R3</i>	Improper spin recovery procedure.
<i>PA.VII.D.R4</i>	Effect of environmental elements on airplane performance related to spins (e.g., turbulence, microbursts, and high-density altitude).
<i>PA.VII.D.R5</i>	Collision hazards, to include aircraft, terrain, obstacles, and wires.
<i>PA.VII.D.R6</i>	Distractions, loss of situational awareness, and/or improper task management.
Skills	[Intentionally left blank]

VIII. BASIC INSTRUMENT MANEUVERS

Task	A. Straight-and-Level Flight
References	FAA-H-8083-2, FAA-H-8083-3, FAA-H-8083-15
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with flying during straight-and-level flight solely by reference to instruments.
Knowledge	The applicant demonstrates understanding of:
<i>PA.VIII.A.K1</i>	Flight instruments as related to:
<i>PA.VIII.A.K1a</i>	a. Sensitivity, limitations, and potential errors in unusual attitudes
<i>PA.VIII.A.K1b</i>	b. Correlation (pitch instruments/bank instruments)
<i>PA.VIII.A.K1c</i>	c. Function and operation
<i>PA.VIII.A.K1d</i>	d. Proper instrument cross-check techniques
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.VIII.A.R1</i>	Instrument flying hazards to include failure to maintain VFR, spatial disorientation, loss of control, fatigue, stress, and emergency off airport landings.
<i>PA.VIII.A.R2</i>	Failure to seek assistance or declare an emergency in a deteriorating situation.
<i>PA.VIII.A.R3</i>	Collision hazards, to include aircraft, terrain, obstacles, and wires.
<i>PA.VIII.A.R4</i>	Distractions, loss of situational awareness, and/or improper task management.
Skills	The applicant demonstrates the ability to:
<i>PA.VIII.A.S1</i>	Maintain straight-and-level flight using proper instrument cross-check and interpretation, and coordinated control application.
<i>PA.VIII.A.S2</i>	Maintain altitude ± 200 feet, heading $\pm 20^\circ$, and airspeed ± 10 knots.

Task	B. Constant Airspeed Climbs
References	FAA-H-8083-2, FAA-H-8083-3, FAA-H-8083-15
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with attitude instrument flying during constant airspeed climbs solely by reference to instruments.
Knowledge	The applicant demonstrates understanding of:
<i>PA.VIII.B.K1</i>	Flight instruments as related to:
<i>PA.VIII.B.K1a</i>	a. Sensitivity, limitations, and potential errors in unusual attitudes
<i>PA.VIII.B.K1b</i>	b. Correlation (pitch instruments/bank instruments)
<i>PA.VIII.B.K1c</i>	c. Function and operation
<i>PA.VIII.B.K1d</i>	d. Proper instrument cross-check techniques
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.VIII.B.R1</i>	Instrument flying hazards to include failure to maintain VFR, spatial disorientation, loss of control, fatigue, stress, and emergency off airport landings.
<i>PA.VIII.B.R2</i>	Failure to seek assistance or declare an emergency in a deteriorating situation.
<i>PA.VIII.B.R3</i>	Collision hazards, to include aircraft, terrain, obstacles, and wires.
<i>PA.VIII.B.R4</i>	Distractions, loss of situational awareness, and/or improper task management.
Skills	The applicant demonstrates the ability to:
<i>PA.VIII.B.S1</i>	Transition to the climb pitch attitude and power setting on an assigned heading using proper instrument cross-check and interpretation, and coordinated flight control application.
<i>PA.VIII.B.S2</i>	Demonstrate climbs at a constant airspeed to specific altitudes in straight flight and turns.
<i>PA.VIII.B.S3</i>	Level off at the assigned altitude and maintain altitude ± 200 feet, heading $\pm 20^\circ$, and airspeed ± 10 knots.

VIII. BASIC INSTRUMENT MANEUVERS (continued)

Task	<i>C. Constant Airspeed Descents</i>
References	FAA-H-8083-2, FAA-H-8083-3, FAA-H-8083-15
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with attitude instrument flying during constant airspeed descents solely by reference to instruments.
Knowledge	The applicant demonstrates understanding of:
<i>PA.VIII.C.K1</i>	Flight instruments as related to:
<i>PA.VIII.C.K1a</i>	a. Sensitivity, limitations, and potential errors in unusual attitudes
<i>PA.VIII.C.K1b</i>	b. Correlation (pitch instruments/bank instruments)
<i>PA.VIII.C.K1c</i>	c. Function and operation
<i>PA.VIII.C.K1d</i>	d. Proper instrument cross-check techniques
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.VIII.C.R1</i>	Instrument flying hazards to include failure to maintain VFR, spatial disorientation, loss of control, fatigue, stress, and emergency off airport landings.
<i>PA.VIII.C.R2</i>	Failure to seek assistance or declare an emergency in a deteriorating situation.
<i>PA.VIII.C.R3</i>	Collision hazards, to include aircraft, terrain, obstacles, and wires.
<i>PA.VIII.C.R4</i>	Distractions, loss of situational awareness, and/or improper task management.
Skills	The applicant demonstrates the ability to:
<i>PA.VIII.C.S1</i>	Transition to the descent pitch attitude and power setting on an assigned heading using proper instrument cross-check and interpretation, and coordinated flight control application.
<i>PA.VIII.C.S2</i>	Demonstrate descents at a constant airspeed to specific altitudes in straight flight and turns.
<i>PA.VIII.C.S3</i>	Level off at the assigned altitude and maintain altitude ± 200 feet, heading $\pm 20^\circ$, and airspeed ± 10 knots.

Task	<i>D. Turns to Headings</i>
References	FAA-H-8083-2, FAA-H-8083-3, FAA-H-8083-15
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with attitude instrument flying during turns to headings solely by reference to instruments.
Knowledge	The applicant demonstrates understanding of:
<i>PA.VIII.D.K1</i>	Flight instruments as related to:
<i>PA.VIII.D.K1a</i>	a. Sensitivity, limitations, and potential errors in unusual attitudes
<i>PA.VIII.D.K1b</i>	b. Correlation (pitch instruments/bank instruments)
<i>PA.VIII.D.K1c</i>	c. Function and operation
<i>PA.VIII.D.K1d</i>	d. Proper instrument cross-check techniques
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.VIII.D.R1</i>	Instrument flying hazards to include failure to maintain VFR, spatial disorientation, loss of control, fatigue, stress, and emergency off airport landings.
<i>PA.VIII.D.R2</i>	Failure to seek assistance or declare an emergency in a deteriorating situation.
<i>PA.VIII.D.R3</i>	Collision hazards, to include aircraft, terrain, obstacles, and wires.
<i>PA.VIII.D.R4</i>	Distractions, loss of situational awareness, and/or improper task management.
Skills	The applicant demonstrates the ability to:
<i>PA.VIII.D.S1</i>	Demonstrate turns to headings, maintain altitude ± 200 feet, maintain a standard rate turn, roll out on the assigned heading $\pm 10^\circ$, and maintain airspeed ± 10 knots.

VIII. BASIC INSTRUMENT MANEUVERS (continued)

Task	<i>E. Recovery from Unusual Flight Attitudes</i>
References	FAA-H-8083-2, FAA-H-8083-3, FAA-H-8083-15
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with attitude instrument flying while recovering from unusual attitudes solely by reference to instruments.
Knowledge	The applicant demonstrates understanding of:
<i>PA.VIII.E.K1</i>	Flight instruments as related to:
<i>PA.VIII.E.K1a</i>	a. Sensitivity, limitations, and potential errors in unusual attitudes
<i>PA.VIII.E.K1b</i>	b. Correlation (pitch instruments/bank instruments)
<i>PA.VIII.E.K1c</i>	c. Function and operation
<i>PA.VIII.E.K1d</i>	d. Proper instrument cross-check techniques
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.VIII.E.R1</i>	Instrument flying hazards to include failure to maintain VFR, spatial disorientation, loss of control, fatigue, stress, and emergency off airport landings.
<i>PA.VIII.E.R2</i>	Failure to seek assistance or declare an emergency in a deteriorating situation.
<i>PA.VIII.E.R3</i>	Collision hazards, to include aircraft, terrain, obstacles, and wires.
<i>PA.VIII.E.R4</i>	Distractions, loss of situational awareness, and/or improper task management.
<i>PA.VIII.E.R5</i>	Failure to interpret flight instruments.
<i>PA.VIII.E.R6</i>	Failure to unload the wings in recovering from high G situations.
Skills	The applicant demonstrates the ability to:
<i>PA.VIII.E.S1</i>	Recognize unusual flight attitudes; perform the correct, coordinated, and smooth flight control application to resolve unusual pitch and bank attitudes while staying within the airplane's limitations and flight parameters.

Task	<i>F. Radio Communications, Navigation Systems/Facilities, and Radar Services</i>
References	FAA-H-8083-2, FAA-H-8083-3, FAA-H-8083-15, FAA-H-8083-25
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with radio communications, navigation systems/facilities, and radar services available for use during flight solely by reference to instruments.
Knowledge	The applicant demonstrates understanding of:
<i>PA.VIII.F.K1</i>	Operating communications equipment to include identifying and selecting radio frequencies, requesting and following ATC instructions.
<i>PA.VIII.F.K2</i>	Operating navigation equipment to include functions and displays, and following bearings, radials, or courses.
<i>PA.VIII.F.K3</i>	Air traffic control facilities and services.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.VIII.F.R1</i>	Failure to seek assistance or declare an emergency in a deteriorating situation.
<i>PA.VIII.F.R2</i>	Failure to utilize all available resources (e.g., automation, ATC, and flight deck planning aids).
Skills	The applicant demonstrates the ability to:
<i>PA.VIII.F.S1</i>	Maintain airplane control while selecting proper communications frequencies, identifying the appropriate facility, and managing navigation equipment.
<i>PA.VIII.F.S2</i>	Comply with ATC instructions.
<i>PA.VIII.F.S3</i>	Maintain altitude ± 200 feet, heading $\pm 20^\circ$, and airspeed ± 10 knots.

IX. EMERGENCY OPERATIONS

Task	A. Emergency Descent
References	FAA-H-8083-2, FAA-H-8083-3; POH/AFM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with an emergency descent. Note: See Appendix 6: Safety of Flight .
Knowledge	The applicant demonstrates understanding of:
<i>PA.IX.A.K1</i>	Situations that require an emergency descent (e.g., depressurization, smoke, and/or engine fire).
<i>PA.IX.A.K2</i>	Immediate action items and emergency procedures.
<i>PA.IX.A.K3</i>	Airspeed, to include airspeed limitations.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.IX.A.R1</i>	Failure to consider altitude, wind, terrain, obstructions, and available glide distance.
<i>PA.IX.A.R2</i>	Collision hazards, to include aircraft, terrain, obstacles, and wires.
<i>PA.IX.A.R3</i>	Improper airplane configuration.
<i>PA.IX.A.R4</i>	Distractions, loss of situational awareness, and/or improper task management.
Skills	The applicant demonstrates the ability to:
<i>PA.IX.A.S1</i>	Clear the area.
<i>PA.IX.A.S2</i>	Establish and maintain the appropriate airspeed and configuration appropriate to the scenario specified by the evaluator and as covered in POH/AFM for the emergency descent.
<i>PA.IX.A.S3</i>	Demonstrate orientation, division of attention and proper planning.
<i>PA.IX.A.S4</i>	Use bank angle between 30° and 45° to maintain positive load factors during the descent.
<i>PA.IX.A.S5</i>	Maintain appropriate airspeed +0/-10 knots, and level off at a specified altitude ±100 feet.
<i>PA.IX.A.S6</i>	Complete the appropriate checklist.

IX. EMERGENCY OPERATIONS (continued)

Task	B. Emergency Approach and Landing (Simulated) (ASEL, ASES)
References	FAA-H-8083-2, FAA-H-8083-3; POH/AFM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with emergency approach and landing procedures. Note: See Appendix 6: Safety of Flight .
Knowledge	The applicant demonstrates understanding of:
<i>PA.IX.B.K1</i>	Immediate action items and emergency procedures.
<i>PA.IX.B.K2</i>	Airspeed, to include:
<i>PA.IX.B.K2a</i>	a. Importance of best glide speed and its relationship to distance
<i>PA.IX.B.K2b</i>	b. Difference between best glide speed and minimum sink speed
<i>PA.IX.B.K2c</i>	c. Effects of wind on glide distance
<i>PA.IX.B.K3</i>	Effects of atmospheric conditions on emergency approach and landing.
<i>PA.IX.B.K4</i>	A stabilized approach, to include energy management concepts.
<i>PA.IX.B.K5</i>	ELTs and other emergency locating devices.
<i>PA.IX.B.K6</i>	ATC services to aircraft in distress.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
<i>PA.IX.B.R1</i>	Failure to consider altitude, wind, terrain, obstructions, gliding distance, and available landing distance.
<i>PA.IX.B.R2</i>	Failure to plan and follow a flightpath to the selected landing area.
<i>PA.IX.B.R3</i>	Collision hazards, to include aircraft, terrain, obstacles, and wires.
<i>PA.IX.B.R4</i>	Improper airplane configuration.
<i>PA.IX.B.R5</i>	Low altitude maneuvering including stall, spin, or CFIT.
<i>PA.IX.B.R6</i>	Distractions, loss of situational awareness, and/or improper task management.
Skills	The applicant demonstrates the ability to:
<i>PA.IX.B.S1</i>	Establish and maintain the recommended best glide airspeed, ± 10 knots.
<i>PA.IX.B.S2</i>	Configure the airplane in accordance with the POH/AFM and existing conditions.
<i>PA.IX.B.S3</i>	Select a suitable landing area considering altitude, wind, terrain, obstructions, and available glide distance.
<i>PA.IX.B.S4</i>	Plan and follow a flightpath to the selected landing area considering altitude, wind, terrain, and obstructions.
<i>PA.IX.B.S5</i>	Prepare for landing as specified by the evaluator.
<i>PA.IX.B.S6</i>	Complete the appropriate checklist.

IX. EMERGENCY OPERATIONS (continued)

Task	C. Systems and Equipment Malfunctions
References	FAA-H-8083-2, FAA-H-8083-3; POH/AFM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with system and equipment malfunctions appropriate to the airplane provided for the practical test and analyzing the situation and take appropriate action for simulated emergencies.
Knowledge	The applicant demonstrates understanding of:
<i>PA.IX.C.K1</i>	Partial or complete power loss related to the specific powerplant, including:
<i>PA.IX.C.K1a</i>	a. Engine roughness or overheat
<i>PA.IX.C.K1b</i>	b. Carburetor or induction icing
<i>PA.IX.C.K1c</i>	c. Loss of oil pressure
<i>PA.IX.C.K1d</i>	d. Fuel starvation
<i>PA.IX.C.K2</i>	System and equipment malfunctions specific to the airplane, including:
<i>PA.IX.C.K2a</i>	a. Electrical malfunction
<i>PA.IX.C.K2b</i>	b. Vacuum/pressure and associated flight instrument malfunctions
<i>PA.IX.C.K2c</i>	c. Pitot/static system malfunction
<i>PA.IX.C.K2d</i>	d. Electronic flight deck display malfunction
<i>PA.IX.C.K2e</i>	e. Landing gear or flap malfunction
<i>PA.IX.C.K2f</i>	f. Inoperative trim
<i>PA.IX.C.K3</i>	Smoke/fire/engine compartment fire.
<i>PA.IX.C.K4</i>	Any other system specific to the airplane (e.g., supplemental oxygen, deicing).
<i>PA.IX.C.K5</i>	Inadvertent door or window opening.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.IX.C.R1</i>	Failure to use the proper checklist for a system or equipment malfunction.
<i>PA.IX.C.R2</i>	Distractions, loss of situational awareness, and/or improper task management.
Skills	The applicant demonstrates the ability to:
<i>PA.IX.C.S1</i>	Describe appropriate action for simulated emergencies specified by the evaluator, from at least three of the elements or sub-elements listed in K1 through K5 above.
<i>PA.IX.C.S2</i>	Complete the appropriate checklist.

Task	<i>D. Emergency Equipment and Survival Gear</i>
References	FAA-H-8083-2, FAA-H-8083-3; POH/AFM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with emergency equipment, and survival gear appropriate to the airplane and environment encountered during flight and identifying appropriate equipment that should be onboard the airplane.
Knowledge	The applicant demonstrates understanding of:
<i>PA.IX.D.K1</i>	Emergency Locator Transmitter (ELT) operations, limitations, and testing requirements.
<i>PA.IX.D.K2</i>	Fire extinguisher operations and limitations.
<i>PA.IX.D.K3</i>	Emergency equipment and survival gear needed for:
<i>PA.IX.D.K3a</i>	a. Climate extremes (hot/cold)
<i>PA.IX.D.K3b</i>	b. Mountainous terrain
<i>PA.IX.D.K3c</i>	c. Overwater operations
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.IX.D.R1</i>	Failure to plan for basic needs (water, clothing, shelter) for 48 to 72 hours.
Skills	The applicant demonstrates the ability to:
<i>PA.IX.D.S1</i>	Identify appropriate equipment and personal gear.
<i>PA.IX.D.S2</i>	Brief passengers on proper use of on-board emergency equipment and survival gear.

TASK REMOVED –	<i>E. Engine Failure During Takeoff Before V_{MC} (Simulated) (AMEL, AMES)</i>
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X. MULTIENGINE OPERATIONS - REMOVED –

TASK REMOVED –	<i>A. REMOVED – Maneuvering with One Engine Inoperative (AMEL, AMES)</i> <i>B. REMOVED – VMC Demonstration (AMEL, MES)</i> <i>C. REMOVED – One Engine Inoperative ... (AMEL, AMES)</i> <i>D. REMOVED – Instrument Approach and Landing with an Inoperative AMEL, AMES) .</i>
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XI NIGHT OPERATIONS

Task	A. Night Preparation
References	FAA-H-8083-2, FAA-H-8083-3, FAA-H-8083-25; AIM; POH/AFM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with night operations.
Knowledge	The applicant demonstrates understanding of:
<i>PA.XI.A.K1</i>	Physiological aspects of vision related to night flying.
<i>PA.XI.A.K2</i>	Lighting systems identifying airports, runways, taxiways and obstructions, as well as pilot controlled lighting.
<i>PA.XI.A.K3</i>	Airplane equipment and lighting requirements for night operations.
<i>PA.XI.A.K4</i>	Personal equipment essential for night flight.
<i>PA.XI.A.K5</i>	Night orientation, navigation, and chart reading techniques.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.XI.A.R1</i>	Collision hazards, to include aircraft, terrain, obstacles, and wires.
<i>PA.XI.A.R2</i>	Distractions, loss of situational awareness, and/or improper task management.
<i>PA.XI.A.R3</i>	Hazards specific to night flying.
Skills	<i>N/A</i> Note: <i>Not generally evaluated in flight. If the practical test is conducted at night, all ACS Tasks are evaluated in that environment, thus there is no need for explicit Task elements to exist here.</i>

XI. POSTFLIGHT PROCEDURES

Task	A. After Landing, Parking and Securing (ASEL, AMEL)
References	FAA-H-8083-2, FAA-H-8083-3; POH/AFM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with after landing, parking, and securing procedures.
Knowledge	The applicant demonstrates understanding of:
<i>PA.XII.A.K1</i>	Airplane shutdown, securing, and postflight inspection.
<i>PA.XII.A.K2</i>	Documenting in-flight/postflight discrepancies.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>PA.XII.A.R1</i>	Inappropriate activities and distractions.
<i>PA.XII.A.R2</i>	Confirmation or expectation bias as related to taxi instructions.
<i>PA.XII.A.R3</i>	Airport specific security procedures.
<i>PA.XII.A.R4</i>	Disembarking passengers.
Skills	The applicant demonstrates the ability to:
<i>PA.XII.A.S1</i>	Demonstrate runway incursion avoidance procedures.
<i>PA.XII.A.S2</i>	Park in an appropriate area, considering the safety of nearby persons and property.
<i>PA.XII.A.S3</i>	Complete the appropriate checklist.
<i>PA.XII.A.S4</i>	Conduct a postflight inspection and document discrepancies and servicing requirements, if any.
<i>PA.XII.A.S5</i>	Secure the airplane.

Appendix Table of Contents

(With the exception of Appendix 6: Safety of Flight, all other have appendices have been removed from this condensed version and can be referenced in the original FAA version.)

Appendix 1: The Knowledge Test Eligibility, Prerequisites, and Testing Centers

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Appendix 3: Airman Knowledge Test Report

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Appendix 6: Safety of Flight

General

Safety of flight must be the prime consideration at all times. The evaluator, applicant, and crew must be constantly alert for other traffic. If performing aspects of a given maneuver, such as emergency procedures, would jeopardize safety, the evaluator will ask the applicant to simulate that portion of the maneuver. The evaluator will assess the applicant's use of visual scanning and collision avoidance procedures throughout the entire test.

Stall and Spin Awareness

During flight training and testing, the applicant and the instructor or evaluator must always recognize and avoid operations that could lead to an inadvertent stall or spin and inadvertent loss of control.

Use of Checklists

Throughout the practical test, the applicant is evaluated on the use of an appropriate checklist.

Assessing proper checklist use depends upon the specific Task. In all cases, the evaluator should determine whether the applicant appropriately divides attention and uses proper visual scanning. In some situations, reading the actual checklist may be impractical or unsafe. In such cases, the evaluator should assess the applicant's performance of published or recommended immediate action "memory" items along with his or her review of the appropriate checklist once conditions permit.

In a single-pilot airplane, the applicant should demonstrate the crew resource management (CRM) principles described as single-pilot resource management (SRM). Proper use is dependent on the specific Task being evaluated. The situation may be such that the use of the checklist while accomplishing elements of an Objective would be either unsafe or impractical in a single-pilot operation. In this case, a review of the checklist after the elements have been accomplished is appropriate.

Use of Distractions

Numerous studies indicate that many accidents have occurred when the pilot has been distracted during critical phases of flight. The evaluator should incorporate realistic distractions during the flight portion of the practical test to evaluate the pilot's situational awareness and ability to utilize proper control technique while dividing attention both inside and outside the cockpit.

Positive Exchange of Flight Controls

There must always be a clear understanding of who has control of the aircraft. Prior to flight, the pilots involved should conduct a briefing that includes reviewing the procedures for exchanging flight controls.

The FAA recommends a positive three-step process for exchanging flight controls between pilots:

- ?? When one pilot seeks to have the other pilot take control of the aircraft, he or she will say, "You have the flight controls."
- ?? The second pilot acknowledges immediately by saying, "I have the flight controls."
- ?? The first pilot again says, "You have the flight controls," and visually confirms the exchange.

Pilots should follow this procedure during any exchange of flight controls, including any occurrence during the practical test. The FAA also recommends that both pilots use a visual check to verify that the exchange has occurred. There must never be any doubt as to who is flying the aircraft.

Aeronautical Decision-Making, Risk Management, Crew Resource Management and Single-Pilot Resource Management

Throughout the practical test, the evaluator must assess the applicant's ability to use sound aeronautical decision-making procedures in order to identify hazards and mitigate risk. The evaluator must accomplish this requirement by reference to the risk management elements of the given Task(s), and by developing scenarios that incorporate and combine Tasks appropriate to assessing the applicant's risk management in making safe aeronautical decisions. For example, the evaluator may develop a scenario that incorporates weather decisions and performance planning.

In assessing the applicant's performance, the evaluator should take note of the applicant's use of CRM and, if appropriate, SRM. CRM/SRM is the set of competencies that includes situational awareness, communication skills, teamwork, task allocation, and decision-making within a comprehensive framework of standard operating procedures (SOP). SRM specifically refers to the management of all resources onboard the aircraft as well as outside resources available to the single pilot.

Deficiencies in CRM/SRM almost always contribute to the unsatisfactory performance of a Task. While evaluation of CRM/SRM may appear to be somewhat subjective, the evaluator should use the risk management elements of the given Task(s) to determine whether the applicant's performance of the Task(s) demonstrates both understanding and application of the associated risk management elements.

Single-Engine Considerations

For safety reasons, the evaluator will not request a simulated powerplant failure in a single-engine airplane unless it is possible to safely complete a landing.

High-Performance Airplane Considerations

In some high-performance airplanes, the power setting may have to be reduced below the ACS guidelines power setting to prevent excessively high pitch attitudes greater than 30° nose up.

Practical Test Checklist (Applicant) Appointment with Evaluator

Evaluator's Name: _____

Location: _____

Date/Time: _____

Acceptable Aircraft

✍ ✍ Aircraft Documents:

✍ ✍ Airworthiness Certificate

✍ ✍ Registration Certificate

✍ ✍ Operating Limitations

✍ ✍ Aircraft Maintenance Records:

✍ ✍ Logbook Record of Airworthiness Inspections and AD Compliance

✍ ✍ Pilot's Operating Handbook, FAA-Approved Aircraft Flight Manual

Personal Equipment

✍ ✍ View-Limiting Device

✍ ✍ Current Aeronautical Charts (Printed or Electronic)

✍ ✍ Computer and Plotter

✍ ✍ Flight Plan Form and Flight Logs (printed or electronic)

✍ ✍ Chart Supplements, Airport Diagrams, and appropriate publications

✍ ✍ Current AIM

Personal Records

✍ ✍ Identification—Photo/Signature ID

✍ ✍ Pilot Certificate

✍ ✍ Current Medical Certificate or BasicMed qualification

✍ ✍ Completed FAA Form 8710-1, Airman Certificate and/or Rating Application with Instructor's Signature or completed IACRA form

✍ ✍ Original Airman Knowledge Test Report

✍ ✍ Pilot Logbook with appropriate Instructor Endorsements

✍ ✍ FAA Form 8060-5, Notice of Disapproval (if applicable)

✍ ✍ Letter of Discontinuance (if applicable)

✍ ✍ Approved School Graduation Certificate (if applicable)

✍ ✍ Evaluator's Fee (if applicable)