U.S. Department of Transportation

Federal Aviation Administration

FAA-S-ACS-6B
(with Change 1)

Private Pilot – Airplane

Airman Certification Standards

Summarized for Single Engine Land

June 2018

Table of Contents

I. Preflight Preparation

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:
PA.I.A.K1	Certification requirements, recent flight experience, and recordkeeping.
PA.I.A.K2	Privileges and limitations.
PA.I.A.K3	Medical certificates: class, expiration, privileges, temporary disqualifications.
PA.I.A.K4	Documents required to exercise private pilot privileges.
PA.I.A.K5	Part 68 BasicMed privileges and limitations.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.I.A.R1	Failure to distinguish proficiency versus currency.
PA.I.A.R2	Flying unfamiliar airplanes, or operating with unfamiliar flight display systems, and avionics.
Skills	The applicant demonstrates the ability to:
PA.I.A.S1	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:
PA.I.B.K1	General airworthiness requirements and compliance for airplanes, including:
PA.I.B.K1a	a. Certificate location and expiration dates
PA.I.B.K1b	b. Required inspections and airplane logbook documentation
PA.I.B.K1c	c. Airworthiness Directives and Special Airworthiness Information Bulletins
PA.I.B.K1d	d. Purpose and procedure for obtaining a special flight permit
PA.I.B.K2	Pilot-performed preventive maintenance.
PA.I.B.K3	Equipment requirements for day and night VFR flight, to include:
PA.I.B.K3a	a. Flying with inoperative equipment
PA.I.B.K3b	b. Using an approved Minimum Equipment List (MEL)
PA.I.B.K3c	c. Kinds of Operation Equipment List (KOEL)
PA.I.B.K3d	d. Required discrepancy records or placards
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.I.B.R1	Inoperative equipment discovered prior to flight.
Skills	The applicant demonstrates the ability to:
PA.I.B.S1	Locate and describe airplane airworthiness and registration information.
PA.I.B.S2	Determine the airplane is airworthy in a scenario given by the evaluator.
PA.I.B.S3	Apply appropriate procedures for operating with inoperative equipment in a scenario given by the evaluator.

I. Preflight Preparation

Task	***C. Weather Information***
References	14 CFR part 91; FAA-H-8083-25; AC 00-6, AC 00-45, AC 00-54; 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:
PA.I.C.K1	Sources of weather data (e.g., National Weather Service, Flight Service) for flight planning purposes.
PA.I.C.K2	Acceptable weather products and resources required for preflight planning, current and forecast weather for departure, en route, and arrival phases of flight.
PA.I.C.K3	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:
PA.I.C.K3a	a. Atmospheric composition and stability
PA.I.C.K3b	b. Wind (e.g., crosswind, tailwind, windshear, mountain wave, etc.)
PA.I.C.K3c	c. Temperature
PA.I.C.K3d	d. Moisture/precipitation
PA.I.C.K3e	e. Weather system formation, including air masses and fronts
PA.I.C.K3f	f. Clouds
PA.I.C.K3g	g. Turbulence
PA.I.C.K3h	h. Thunderstorms and microbursts
PA.I.C.K3i	i. Icing and freezing level information
PA.I.C.K3j	j. Fog/mist
PA.I.C.K3k	k. Frost
PA.I.C.K3l	l. Obstructions to visibility (e.g., smoke, haze, volcanic ash, etc.)
PA.I.C.K4	Flight deck displays of digital weather and aeronautical information.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.I.C.R1	Factors involved in making the go/no-go and continue/divert decisions, to include:
PA.I.C.R1a	a. Circumstances that would make diversion prudent
PA.I.C.R1b	b. Personal weather minimums
PA.I.C.R1c	c. Hazardous weather conditions to include known or forecast icing or turbulence aloft
PA.I.C.R2	Limitations of:
PA.I.C.R2a	a. Onboard weather equipment
PA.I.C.R2b	b. Aviation weather reports and forecasts
PA.I.C.R2c	c. Inflight weather resources
Skills	The applicant demonstrates the ability to:
PA.I.C.S1	Use available aviation weather resources to obtain an adequate weather briefing.
PA.I.C.S2	Analyze the implications of at least three of the conditions listed in K3a through K3l above, using actual weather or weather conditions in a scenario provided by the evaluator.
PA.I.C.S3	Correlate weather information to make a competent go/no-go decision.

I. Preflight Preparation

Task	***D. Cross-Country Flight Planning***
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:
PA.I.D.K1	Route planning, including consideration of different classes and special use airspace (SUA) and selection of appropriate and available navigation/communication systems and facilities.
PA.I.D.K2	Altitude selection accounting for terrain and obstacles, glide distance of the airplane, VFR cruising altitudes, and the effect of wind.
PA.I.D.K3	Calculating:
PA.I.D.K3a	a. Time, climb and descent rates, course, distance, heading, true airspeed, and groundspeed
PA.I.D.K3b	b. Estimated time of arrival to include conversion to universal coordinated time (UTC)
PA.I.D.K3c	c. Fuel requirements, to include reserve
PA.I.D.K4	Elements of a VFR flight plan.
PA.I.D.K5	Procedures for activating and closing a VFR flight plan.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.I.D.R1	Pilot.
PA.I.D.R2	Aircraft.
PA.I.D.R3	Environment (e.g., weather, airports, airspace, terrain, obstacles).
PA.I.D.R4	External pressures.
PA.I.D.R5	Limitations of air traffic control (ATC) services.
PA.I.D.R6	Improper fuel planning.
Skills	The applicant demonstrates the ability to:
PA.I.D.S1	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.
PA.I.D.S2	Apply pertinent information from appropriate and current aeronautical charts, Chart Supplements; NOTAMs relative to airport, runway and taxiway closures; and other flight publications.
PA.I.D.S3	Create a navigation plan and simulate filing a VFR flight plan.
PA.I.D.S4	Recalculate fuel reserves based on a scenario provided by the evaluator.

I. Preflight Preparation

Task	***E. National Airspace System***
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:
PA.I.E.K1	Types of airspace/airspace classes and associated requirements and limitations.
PA.I.E.K2	Charting symbology.
PA.I.E.K3	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:
PA.I.E.R1	Various classes and types of airspace.
Skills	The applicant demonstrates the ability to:
PA.I.E.S1	Identify and comply with the requirements for basic VFR weather minimums and flying in particular classes of airspace.
PA.I.E.S2	Correctly identify airspace and operate in accordance with associated communication and equipment requirements.
PA.I.E.S3	Identify the requirements for operating in SUA or within a TFR. Identify and comply with SATR and SFRA operations, if applicable.

I. Preflight Preparation

Task	***F. Performance and Limitations***
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:
PA.I.F.K1	Elements related to performance and limitations by explaining the use of charts, tables, and data to determine performance.
PA.I.F.K2	Factors affecting performance, to include:
PA.I.F.K2a	a. Atmospheric conditions
PA.I.F.K2b	b. Pilot technique
PA.I.F.K2c	c. Airplane configuration
PA.I.F.K2d	d. Airport environment
PA.I.F.K2e	e. Loading (e.g., center of gravity)
PA.I.F.K2f	f. Weight and balance
PA.I.F.K3	Aerodynamics.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.I.F.R1	Inaccurate use of manufacturer's performance charts, tables, and data.
PA.I.F.R2	Exceeding airplane limitations.
PA.I.F.R3	Possible differences between calculated performance and actual performance.
Skills	The applicant demonstrates the ability to:
PA.I.F.S1	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.
PA.I.F.S2	Utilize the appropriate airplane manufacturer's approved performance charts, tables, and data.

I. Preflight Preparation

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:

PA.I.G.K1 Airplane systems, to include:

Note: *If K1 is selected, the evaluator must assess the applicant's knowledge of at least three of the following sub-elements.*

PA.I.G.K1a a. Primary flight controls

PA.I.G.K1b b. Secondary flight controls

PA.I.G.K1c c. Powerplant and propeller

PA.I.G.K1d d. Landing gear

PA.I.G.K1e e. Fuel, oil, and hydraulic

PA.I.G.K1f f. Electrical

PA.I.G.K1g g. Avionics

PA.I.G.K1h h. Pitot-static, vacuum/pressure, and associated flight instruments

PA.I.G.K1i i. Environmental

PA.I.G.K1j j. Deicing and anti-icing

PA.I.G.K1k k. Water rudders (ASES, AMES)

PA.I.G.K1l l. Oxygen system

PA.I.G.K2 Indications of and procedures for managing system abnormalities or failures.

Risk Management The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:

PA.I.G.R1 Failure to detect system malfunctions or failures.

PA.I.G.R2 Improper management of a system failure.

PA.I.G.R3 Failure to monitor and manage automated systems.

Skills The applicant demonstrates the ability to:

PA.I.G.S1 Operate at least three of the systems listed in K1a through K1l above appropriately.

PA.I.G.S2 Use appropriate checklists properly.

I. Preflight Preparation

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:

PA.I.H.K1 The symptoms (as applicable), recognition, causes, effects, and corrective actions associated with aeromedical and physiological issues including:

PA.I.H.K1a a. Hypoxia
PA.I.H.K1b b. Hyperventilation
PA.I.H.K1c c. Middle ear and sinus problems
PA.I.H.K1d d. Spatial disorientation
PA.I.H.K1e e. Motion sickness
PA.I.H.K1f f. Carbon monoxide poisoning
PA.I.H.K1g g. Stress
PA.I.H.K1h h. Fatigue
PA.I.H.K1i i. Dehydration and nutrition
PA.I.H.K1j j. Hypothermia
PA.I.H.K1k k. Optical illusions
PA.I.H.K1l l. Dissolved nitrogen in the bloodstream after scuba dives

PA.I.H.K2 Regulations regarding use of alcohol and drugs.
PA.I.H.K3 Effects of alcohol, drugs, and over-the-counter medications.
PA.I.H.K4 Aeronautical Decision-Making (ADM).

Risk Management The applicant demonstrates the ability to identify, assess and mitigate risks encompassing:

PA.I.H.R1 Aeromedical and physiological issues.
PA.I.H.R2 Hazardous attitudes.
PA.I.H.R3 Distractions, loss of situational awareness, or improper task management.

Skills The applicant demonstrates the ability to:

PA.I.H.S1 Associate the symptoms and effects for at least three of the conditions listed in K1a through K1l above with the cause(s) and corrective action(s).

PA.I.H.S2 Perform self-assessment, including fitness for flight and personal minimums, for actual flight or a scenario given by the evaluator.

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:
PA.II.A.K1	Pilot self-assessment.
PA.II.A.K2	Determining that the airplane to be used is appropriate and airworthy.
PA.II.A.K3	Airplane preflight inspection including:
PA.II.A.K3a	a. Which items must be inspected
PA.II.A.K3b	b. The reasons for checking each item
PA.II.A.K3c	c. How to detect possible defects
PA.II.A.K3d	d. The associated regulations
PA.II.A.K4	Environmental factors including weather, terrain, route selection, and obstructions.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.II.A.R1	Pilot.
PA.II.A.R2	Aircraft.
PA.II.A.R3	Environment (e.g., weather, airports, airspace, terrain, obstacles).
PA.II.A.R4	External pressures.
PA.II.A.R5	Aviation security concerns.
Skills	The applicant demonstrates the ability to:
PA.II.A.S1	Inspect the airplane with reference to an appropriate checklist.
PA.II.A.S2	Verify the airplane is in condition for safe flight and conforms to its type design.

II. Preflight Procedures

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:
PA.II.B.K1	Passenger briefing requirements, to include operation and required use of safety restraint systems.
PA.II.B.K2	Use of appropriate checklists.
PA.II.B.K3	Requirements for current and appropriate navigation data.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.II.B.R1	Improper use of systems or equipment, to include automation and portable electronic devices.
PA.II.B.R2	Flying with unresolved discrepancies.
Skills	The applicant demonstrates the ability to:
PA.II.B.S1	Secure all items in the flight deck and cabin.
PA.II.B.S2	Conduct an appropriate pre-takeoff briefing, to include identifying the PIC, use of safety belts, shoulder harnesses, doors, sterile flight deck, and emergency procedures.
PA.II.B.S3	Program and manage the airplane’s automation properly.

II. Preflight Procedures

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:
PA.II.C.K1	Starting under various conditions.
PA.II.C.K2	Starting the engine(s) by use of external power.
PA.II.C.K3	Engine limitations as they relate to starting.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.II.C.R1	Propeller safety.
Skills	The applicant demonstrates the ability to:
PA.II.C.S1	Position the airplane properly considering structures, other aircraft, wind, and the safety of nearby persons and property.
PA.II.C.S2	Complete the appropriate checklist.

II. Preflight Procedures

Task	***D. Taxiing (ASEL, AMEL)***
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:
PA.II.D.K1	Current airport aeronautical references and information resources such as the Chart Supplement, airport diagram, and NOTAMS.
PA.II.D.K2	Taxi instructions/clearances.
PA.II.D.K3	Airport markings, signs, and lights.
PA.II.D.K4	Visual indicators for wind.
PA.II.D.K5	Aircraft lighting.
PA.II.D.K6	Procedures for:
PA.II.D.K6a	a. Appropriate flight deck activities prior to taxi, including route planning and identifying the location of Hot Spots
PA.II.D.K6b	b. Radio communications at towered and nontowered airports
PA.II.D.K6c	c. Entering or crossing runways
PA.II.D.K6d	d. Night taxi operations
PA.II.D.K6e	e. Low visibility taxi operations
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.II.D.R1	Inappropriate activities and distractions.
PA.II.D.R2	Confirmation or expectation bias as related to taxi instructions.
PA.II.D.R3	A taxi route or departure runway change.
Skills	The applicant demonstrates the ability to:
PA.II.D.S1	Receive and correctly read back clearances/instructions, if applicable.
PA.II.D.S2	Use an airport diagram or taxi chart during taxi, if published, and maintain situational awareness.
PA.II.D.S3	Position the flight controls for the existing wind.
PA.II.D.S4	Complete the appropriate checklist.
PA.II.D.S5	Perform a brake check immediately after the airplane begins moving.
PA.II.D.S6	Maintain positive control of the airplane during ground operations by controlling direction and speed without excessive use of brakes.
PA.II.D.S7	Comply with airport/taxiway markings, signals, and ATC clearances and instructions.
PA.II.D.S8	Position the airplane properly relative to hold lines.

II. Preflight Procedures

Task	***F. Before Takeoff Check***
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:
PA.II.F.K1	Purpose of pre-takeoff checklist items including:
PA.II.F.K1a	a. Reasons for checking each item
PA.II.F.K1b	b. Detecting malfunctions
PA.II.F.K1c	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:
PA.II.F.R1	Division of attention while conducting pre-flight checks.
PA.II.F.R2	Unexpected runway changes by ATC.
PA.II.F.R3	Wake turbulence.
PA.II.F.R4	A powerplant failure during takeoff or other malfunction considering operational factors such as airplane characteristics, runway/takeoff path length, surface conditions, environmental conditions, and obstructions.
Skills	The applicant demonstrates the ability to:
PA.II.F.S1	Review takeoff performance.
PA.II.F.S2	Complete the appropriate checklist.
PA.II.F.S3	Position the airplane appropriately considering other aircraft, vessels, and wind.
PA.II.F.S4	Divide attention inside and outside the flight deck.
PA.II.F.S5	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.

III. Airport and Seaplane Base Operations

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, or improper task management.
PA.III.B.R3	Wake turbulence or windshear.
Skills	The applicant demonstrates the ability to:
PA.III.B.S1	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: *If a crosswind condition does not exist, the applicant's knowledge of crosswind elements must be evaluated through oral testing.*

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, terrain, obstacles, wires, vehicles, vessels, persons, and wildlife.
PA.IV.A.R5 Low altitude maneuvering including stall, spin, or CFIT.
PA.IV.A.R6 Distractions, loss of situational awareness, 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.
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 Avoid excessive water spray on the propeller(s) (ASES, AMES).
PA.IV.A.S9 Rotate and lift off at the recommended airspeed and accelerate to V_Y.
PA.IV.A.S10 Retract the water rudders, as appropriate, establish and maintain the most efficient planing/liftoff attitude, and correct for porpoising and skipping (ASES, AMES).
PA.IV.A.S11 Establish a pitch attitude to maintain the manufacturer's recommended speed or V_Y, +10/-5 knots.
PA.IV.A.S12 Configure the airplane in accordance with manufacturer's guidance.
PA.IV.A.S13 Maintain V_Y +10/-5 knots to a safe maneuvering altitude.
PA.IV.A.S14 Maintain directional control and proper wind-drift correction throughout takeoff and climb.
PA.IV.A.S15 Comply with noise abatement procedures.

IV. Takeoffs, Landings, and Go-Arounds

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 of flight controls.

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

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 or approach path and touchdown area 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, terrain, obstacles, wires, vehicles, vessels, persons, and wildlife.
PA.IV.B.R5 Low altitude maneuvering including stall, spin, or CFIT.
PA.IV.B.R6 Distractions, loss of situational awareness, incorrect airport surface approach and landing, 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 runway or landing surface and the adjoining area for traffic and obstructions.
PA.IV.B.S5 Select and aim for a suitable touchdown point considering the wind, landing surface, and obstructions.
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 directional control and appropriate crosswind correction 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

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, terrain, obstacles, wires, vehicles, persons, and wildlife.
PA.IV.C.R5 Low altitude maneuvering including stall, spin, or CFIT.
PA.IV.C.R6 Distractions, loss of situational awareness, 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.
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

Task ***D. Soft-Field Approach and Landing (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 approach and landing with emphasis on proper use and coordination of flight controls.

Knowledge The applicant demonstrates understanding of:
PA.IV.D.K1 A stabilized approach, to include energy management concepts.
PA.IV.D.K2 Effects of atmospheric conditions, including wind, on approach and landing performance.
PA.IV.D.K3 Wind correction techniques on approach and landing.

Risk Management The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.IV.D.R1 Selection of runway based on pilot capability, airplane performance and limitations, available distance, and wind.
PA.IV.D.R2 Effects of:
PA.IV.D.R2a a. Crosswind
PA.IV.D.R2b b. Windshear
PA.IV.D.R2c c. Tailwind
PA.IV.D.R2d d. Wake turbulence
PA.IV.D.R2e e. Runway surface/condition
PA.IV.D.R3 Planning for:
PA.IV.D.R3a a. Go-around and rejected landing
PA.IV.D.R3b b. Land and hold short operations (LAHSO)
PA.IV.D.R4 Collision hazards, to include aircraft, terrain, obstacles, wires, vehicles, persons, and wildlife.
PA.IV.D.R5 Low altitude maneuvering including stall, spin, or CFIT.
PA.IV.D.R6 Distractions, loss of situational awareness, or improper task management.

Skills The applicant demonstrates the ability to:
PA.IV.D.S1 Complete the appropriate checklist.
PA.IV.D.S2 Make radio calls as appropriate.
PA.IV.D.S3 Ensure the airplane is aligned with the correct/assigned runway.
PA.IV.D.S4 Scan the landing runway and adjoining area for traffic and obstructions.
PA.IV.D.S5 Select and aim for a suitable touchdown point considering the wind, landing surface, and obstructions.
PA.IV.D.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.D.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.D.S8 Maintain directional control and appropriate crosswind correction throughout the approach and landing.
PA.IV.D.S9 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.
PA.IV.D.S10 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.
PA.IV.D.S11 Maintain elevator as recommended by manufacturer during rollout and exit the "soft" area at a speed that would preclude sinking into the surface.
PA.IV.D.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.D.S13 Maintain proper position of the flight controls and sufficient speed to taxi while on the soft surface.

IV. Takeoffs, Landings, and Go-Arounds

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

IV. Takeoffs, Landings, and Go-Arounds

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, terrain, obstacles, wires, vehicles, persons, and wildlife.
PA.IV.F.R5	Low altitude maneuvering including stall, spin, or CFIT.
PA.IV.F.R6	Distractions, loss of situational awareness, 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	Select and aim for a suitable touchdown point considering the wind, landing surface, and obstructions.
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 approach airspeed or in its absence not more than 1.3 V_{SO}, +10/-5 knots with gust factor applied.
PA.IV.F.S8	Maintain directional control and appropriate crosswind correction 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

Task ***M. Forward Slip to a Landing (ASEL, ASES)***
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:
PA.IV.M.K1 Concepts of energy management during a forward slip approach.
PA.IV.M.K2 Effects of atmospheric conditions, including wind, on approach and landing performance.
PA.IV.M.K3 Wind correction techniques during forward slip.
PA.IV.M.K4 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:
PA.IV.M.R1 Selection of runway or approach path and touchdown area based on pilot capability, airplane performance and limitations, available distance, and wind.
PA.IV.M.R2 Effects of:
PA.IV.M.R2a a. Crosswind
PA.IV.M.R2b b. Windshear
PA.IV.M.R2c c. Tailwind
PA.IV.M.R2d d. Wake turbulence
PA.IV.M.R2e e. Landing surface/condition
PA.IV.M.R3 Planning for:
PA.IV.M.R3a a. Go-around and rejected landing
PA.IV.M.R3b b. Land and hold short operations (LAHSO)
PA.IV.M.R4 Collision hazards, to include aircraft, terrain, obstacles, wires, vehicles, vessels, persons, and wildlife.
PA.IV.M.R5 Low altitude maneuvering including stall, spin, or CFIT.
PA.IV.M.R6 Distractions, loss of situational awareness, or improper task management.
PA.IV.M.R7 Forward slip operations, including fuel flowage, tail stalls with flaps, and lack of airspeed control.
PA.IV.M.R8 Surface contact with the airplane's longitudinal axis misaligned.
PA.IV.M.R9 Unstable approach.

Skills The applicant demonstrates the ability to:
PA.IV.M.S1 Complete the appropriate checklist.
PA.IV.M.S2 Make radio calls as appropriate.
PA.IV.M.S3 Plan and follow a flightpath to the selected landing area considering altitude, wind, terrain, and obstructions.
PA.IV.M.S4 Select the most suitable touchdown point based on wind, landing surface, obstructions, and airplane limitations.
PA.IV.M.S5 Position airplane on downwind leg, parallel to landing runway.
PA.IV.M.S6 Configure the airplane correctly.
PA.IV.M.S7 As necessary, correlate crosswind with direction of forward slip and transition to sideslip before touchdown.
PA.IV.M.S8 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.M.S9 Maintain a ground track aligned with the runway center/landing path.

IV. Takeoffs, Landings, and Go-Arounds

Task	***N. Go-Around/Rejected Landing***
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:
PA.IV.N.K1	A stabilized approach, to include energy management concepts.
PA.IV.N.K2	Effects of atmospheric conditions, including wind and density altitude on a go-around or rejected landing.
PA.IV.N.K3	Wind correction techniques on takeoff/departure and approach/landing.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.IV.N.R1	Delayed recognition of the need for a go-around/rejected landing.
PA.IV.N.R2	Delayed performance of a go-around at low altitude.
PA.IV.N.R3	Improper application of power.
PA.IV.N.R4	Improper airplane configuration.
PA.IV.N.R5	Collision hazards, to include aircraft, terrain, obstacles, wires, vehicles, vessels, persons, and wildlife.
PA.IV.N.R6	Low altitude maneuvering including stall, spin, or CFIT.
PA.IV.N.R7	Distractions, loss of situational awareness, or improper task management.
Skills	The applicant demonstrates the ability to:
PA.IV.N.S1	Complete the appropriate checklist.
PA.IV.N.S2	Make radio calls as appropriate.
PA.IV.N.S3	Make a timely decision to discontinue the approach to landing.
PA.IV.N.S4	Apply takeoff power immediately and transition to climb pitch attitude for V_X or V_Y as appropriate +10/-5 knots.
PA.IV.N.S5	Configure the airplane after a positive rate of climb has been verified or in accordance with airplane manufacturer's instructions.
PA.IV.N.S6	Maneuver to the side of the runway/landing area when necessary to clear and avoid conflicting traffic.
PA.IV.N.S7	Maintain V_Y +10/-5 knots to a safe maneuvering altitude.
PA.IV.N.S8	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:
PA.V.A.K1 Purpose of steep turns.
PA.V.A.K2 Aerodynamics associated with steep turns, to include:
PA.V.A.K2a a. Coordinated and uncoordinated flight
PA.V.A.K2b b. Overbanking tendencies
PA.V.A.K2c c. Maneuvering speed, including the impact of weight changes
PA.V.A.K2d d. Load factor and accelerated stalls
PA.V.A.K2e e. Rate and radius of turn

Risk Management The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.V.A.R1 Failure to divide attention between airplane control and orientation.
PA.V.A.R2 Collision hazards, to include aircraft and terrain.
PA.V.A.R3 Low altitude maneuvering including stall, spin, or CFIT.
PA.V.A.R4 Distractions, improper task management, loss of situational awareness, or disorientation.
PA.V.A.R5 Failure to maintain coordinated flight.

Skills The applicant demonstrates the ability to:
PA.V.A.S1 Clear the area.
PA.V.A.S2 Establish the manufacturer's recommended airspeed; or if one is not available, an airspeed not to exceed V_A.
PA.V.A.S3 Roll into a coordinated 360° steep turn with approximately a 45° bank.
PA.V.A.S4 Perform the Task in the opposite direction, as specified by evaluator.
PA.V.A.S5 Maintain the entry altitude ±100 feet, airspeed ±10 knots, bank ±5°, and roll out on the entry heading ±10°.

V. Performance and Ground Reference Maneuvers

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, 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: *The evaluator must select at least one maneuver for the applicant to demonstrate.*
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:
PA.VI.A.K1	Pilotage and dead reckoning.
PA.VI.A.K2	Magnetic compass errors.
PA.VI.A.K3	Topography.
PA.VI.A.K4	Selection of appropriate:
PA.VI.A.K4a	a. Route
PA.VI.A.K4b	b. Altitude(s)
PA.VI.A.K4c	c. Checkpoints
PA.VI.A.K5	Plotting a course, to include:
PA.VI.A.K5a	a. Determining heading, speed, and course
PA.VI.A.K5b	b. Wind correction angle
PA.VI.A.K5c	c. Estimating time, speed, and distance
PA.VI.A.K5d	d. True airspeed and density altitude
PA.VI.A.K6	Power setting selection.
PA.VI.A.K7	Planned versus actual flight plan calculations and required corrections.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.VI.A.R1	Collision hazards, to include aircraft, terrain, obstacles, and wires.
PA.VI.A.R2	Distractions, loss of situational awareness, or improper task management.
Skills	The applicant demonstrates the ability to:
PA.VI.A.S1	Prepare and use a flight log.
PA.VI.A.S2	Navigate by pilotage.
PA.VI.A.S3	Navigate by means of pre-computed headings, groundspeeds, and elapsed time.
PA.VI.A.S4	Use the magnetic direction indicator in navigation, to include turns to headings.
PA.VI.A.S5	Verify position within three nautical miles of the flight-planned route.
PA.VI.A.S6	Arrive at the en route checkpoints within five minutes of the initial or revised estimated time of arrival (ETA) and provide a destination estimate.
PA.VI.A.S7	Maintain the appropriate altitude ±200 feet and heading ±15°.

VI. Navigation

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: *The evaluator should reference the manufacturer's equipment supplement(s) as necessary.*

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:

PA.VI.B.K1 Ground-based navigation (orientation, course determination, equipment, tests, and regulations).

PA.VI.B.K2 Satellite-based navigation (e.g., equipment, regulations, database considerations, and limitations of satellite navigation).

PA.VI.B.K3 Radar assistance to VFR aircraft (e.g., operations, equipment, available services, traffic advisories).

PA.VI.B.K4 Transponder (Mode(s) A, C, and S).

Risk Management The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:

PA.VI.B.R1 Failure to manage automated navigation and autoflight systems.

PA.VI.B.R2 Distractions, loss of situational awareness, or improper task management.

PA.VI.B.R3 Limitations of the navigation system in use.

PA.VI.B.R4 Loss of a navigation signal.

Skills The applicant demonstrates the ability to:

PA.VI.B.S1 Use an airborne electronic navigation system.

PA.VI.B.S2 Determine the airplane's position using the navigation system.

PA.VI.B.S3 Intercept and track a given course, radial, or bearing, as appropriate.

PA.VI.B.S4 Recognize and describe the indication of station or waypoint passage, if appropriate.

PA.VI.B.S5 Recognize signal loss or interference and take appropriate action, if applicable.

PA.VI.B.S6 Use proper communication procedures when utilizing radar services.

PA.VI.B.S7 Maintain the appropriate altitude ±200 feet and heading ±15°.

VI. Navigation

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 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, 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 or seaplane base.
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 destination 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 ±15°.
PA.VI.C.S4	Update/interpret weather in flight.
PA.VI.C.S5	Utilize flight deck displays of digital weather and aeronautical information, as applicable.

VI. Navigation

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, 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 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, FAA-H-8083-25; 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:

PA.VII.A.K1 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:

PA.VII.A.R1 Inadvertent slow flight and flight with a stall warning, which could lead to loss of control.

PA.VII.A.R2 Range and limitations of stall warning indicators (e.g., airplane buffet, stall horn, etc.).

PA.VII.A.R3 Failure to maintain coordinated flight.

PA.VII.A.R4 Effect of environmental elements on airplane performance (e.g., turbulence, microbursts, and high-density altitude).

PA.VII.A.R5 Collision hazards, to include aircraft, terrain, obstacles, and wires.

PA.VII.A.R6 Distractions, loss of situational awareness, or improper task management.

Skills The applicant demonstrates the ability to:

PA.VII.A.S1 Clear the area.

PA.VII.A.S2 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).

PA.VII.A.S3 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.).

PA.VII.A.S4 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.).

PA.VII.A.S5 Maintain the specified altitude, ±100 feet; specified heading, ±10°; airspeed, +10/-0 knots; and specified angle of bank, ±10°.

VII. Slow Flight and Stalls

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:
PA.VII.B.K1 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.
PA.VII.B.K2 Stall characteristics (i.e., airplane design) and impending stall and full stall indications (i.e., how to recognize by sight, sound, or feel).
PA.VII.B.K3 Factors and situations that can lead to a power-off stall and actions that can be taken to prevent it.
PA.VII.B.K4 Fundamentals of stall recovery.

Risk Management The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.VII.B.R1 Factors and situations that could lead to an inadvertent power-off stall, spin, and loss of control.
PA.VII.B.R2 Range and limitations of stall warning indicators (e.g., airplane buffet, stall horn, etc.).
PA.VII.B.R3 Failure to recognize and recover at the stall warning during normal operations.
PA.VII.B.R4 Improper stall recovery procedure.
PA.VII.B.R5 Secondary stalls, accelerated stalls, and cross-control stalls.
PA.VII.B.R6 Effect of environmental elements on airplane performance related to power-off stalls (e.g., turbulence, microbursts, and high-density altitude).
PA.VII.B.R7 Collision hazards, to include aircraft, terrain, obstacles, and wires.
PA.VII.B.R8 Distractions, improper task management, loss of situational awareness, or disorientation.

Skills The applicant demonstrates the ability to:
PA.VII.B.S1 Clear the area.
PA.VII.B.S2 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).
PA.VII.B.S3 Configure the airplane in the approach or landing configuration, as specified by the evaluator, and maintain coordinated flight throughout the maneuver.
PA.VII.B.S4 Establish a stabilized descent.
PA.VII.B.S5 Transition smoothly from the approach or landing attitude to a pitch attitude that will induce a stall.
PA.VII.B.S6 Maintain a specified heading ±10° if in straight flight; maintain a specified angle of bank not to exceed 20°, ±10° if in turning flight, while inducing the stall.
PA.VII.B.S7 Acknowledge cues of the impending stall and then recover promptly after a full stall occurs.
PA.VII.B.S8 Execute a stall recovery in accordance with procedures set forth in the POH/AFM.
PA.VII.B.S9 Configure the airplane as recommended by the manufacturer, and accelerate to V_X or V_Y.
PA.VII.B.S10 Return to the altitude, heading, and airspeed specified by the evaluator.

VII. Slow Flight and Stalls

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:

PA.VII.C.K1 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.

PA.VII.C.K2 Stall characteristics (i.e., airplane design) and impending stall and full stall indications (i.e., how to recognize by sight, sound, or feel).

PA.VII.C.K3 Factors and situations that can lead to a power-on stall and actions that can be taken to prevent it.

PA.VII.C.K4 Fundamentals of stall recovery.

Risk Management The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:

PA.VII.C.R1 Factors and situations that could lead to an inadvertent power-on stall, spin, and loss of control.

PA.VII.C.R2 Range and limitations of stall warning indicators (e.g., airplane buffet, stall horn, etc.).

PA.VII.C.R3 Failure to recognize and recover at the stall warning during normal operations.

PA.VII.C.R4 Improper stall recovery procedure.

PA.VII.C.R5 Secondary stalls, accelerated stalls, elevator trim stalls, and cross-control stalls.

PA.VII.C.R6 Effect of environmental elements on airplane performance related to power-on stalls (e.g., turbulence, microbursts, and high-density altitude).

PA.VII.C.R7 Collision hazards, to include aircraft, terrain, obstacles, and wires.

PA.VII.C.R8 Distractions, improper task management, loss of situational awareness, or disorientation.

Skills The applicant demonstrates the ability to:

PA.VII.C.S1 Clear the area.

PA.VII.C.S2 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).

PA.VII.C.S3 Establish the takeoff, departure, or cruise configuration, as specified by the evaluator, and maintain coordinated flight throughout the maneuver.

PA.VII.C.S4 Set power (as assigned by the evaluator) to no less than 65 percent power.

PA.VII.C.S5 Transition smoothly from the takeoff or departure attitude to the pitch attitude that will induce a stall.

PA.VII.C.S6 Maintain a specified heading ±10° if in straight flight; maintain a specified angle of bank not to exceed 20°, ±10° if in turning flight, while inducing the stall.

PA.VII.C.S7 Acknowledge cues of the impending stall and then recover promptly after a full stall occurs.

PA.VII.C.S8 Execute a stall recovery in accordance with procedures set forth in the POH/AFM.

PA.VII.C.S9 Configure the airplane as recommended by the manufacturer, and accelerate to V_X or V_Y.

PA.VII.C.S10 Return to the altitude, heading, and airspeed specified by the evaluator.

VII. Slow Flight and Stalls

Task	***D. Spin Awareness***
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:
PA.VII.D.K1	Aerodynamics associated with spins 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.
PA.VII.D.K2	What causes a spin and how to identify the entry, incipient, and developed phases of a spin.
PA.VII.D.K3	Spin recovery procedure.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.VII.D.R1	Factors and situations that could lead to inadvertent spin and loss of control.
PA.VII.D.R2	Range and limitations of stall warning indicators (e.g., airplane buffet, stall horn, etc.).
PA.VII.D.R3	Improper spin recovery procedure.
PA.VII.D.R4	Effect of environmental elements on airplane performance related to spins (e.g., turbulence, microbursts, and high-density altitude).
PA.VII.D.R5	Collision hazards, to include aircraft, terrain, obstacles, and wires.
PA.VII.D.R6	Distractions, improper task management, loss of situational awareness, or disorientation.
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:
PA.VIII.A.K1	Flight instruments as related to:
PA.VIII.A.K1a	a. Sensitivity, limitations, and potential errors in unusual attitudes
PA.VIII.A.K1b	b. Correlation (pitch instruments/bank instruments)
PA.VIII.A.K1c	c. Function and operation
PA.VIII.A.K1d	d. Proper instrument cross-check techniques
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.VIII.A.R1	Instrument flying hazards to include failure to maintain VFR, spatial disorientation, loss of control, fatigue, stress, and emergency off airport landings.
PA.VIII.A.R2	Failure to seek assistance or declare an emergency in a deteriorating situation.
PA.VIII.A.R3	Collision hazards, to include aircraft, terrain, obstacles, and wires.
PA.VIII.A.R4	Distractions, loss of situational awareness, or improper task management.
Skills	The applicant demonstrates the ability to:
PA.VIII.A.S1	Maintain straight-and-level flight using proper instrument cross-check and interpretation, and coordinated control application.
PA.VIII.A.S2	Maintain altitude ±200 feet, heading ±20°, and airspeed ±10 knots.

VIII. Basic Instrument Maneuvers

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:
PA.VIII.B.K1	Flight instruments as related to:
PA.VIII.B.K1a	a. Sensitivity, limitations, and potential errors in unusual attitudes
PA.VIII.B.K1b	b. Correlation (pitch instruments/bank instruments)
PA.VIII.B.K1c	c. Function and operation
PA.VIII.B.K1d	d. Proper instrument cross-check techniques
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.VIII.B.R1	Instrument flying hazards to include failure to maintain VFR, spatial disorientation, loss of control, fatigue, stress, and emergency off airport landings.
PA.VIII.B.R2	Failure to seek assistance or declare an emergency in a deteriorating situation.
PA.VIII.B.R3	Collision hazards, to include aircraft, terrain, obstacles, and wires.
PA.VIII.B.R4	Distractions, loss of situational awareness, or improper task management.
Skills	The applicant demonstrates the ability to:
PA.VIII.B.S1	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.
PA.VIII.B.S2	Climb at a constant airspeed to specific altitudes in straight flight and turns.
PA.VIII.B.S3	Level off at the assigned altitude and maintain altitude ±200 feet, heading ±20°, and airspeed ±10 knots.

VIII. Basic Instrument Maneuvers

Task	***C. Constant Airspeed Descents***
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:
PA.VIII.C.K1	Flight instruments as related to:
PA.VIII.C.K1a	a. Sensitivity, limitations, and potential errors in unusual attitudes
PA.VIII.C.K1b	b. Correlation (pitch instruments/bank instruments)
PA.VIII.C.K1c	c. Function and operation
PA.VIII.C.K1d	d. Proper instrument cross-check techniques
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.VIII.C.R1	Instrument flying hazards to include failure to maintain VFR, spatial disorientation, loss of control, fatigue, stress, and emergency off airport landings.
PA.VIII.C.R2	Failure to seek assistance or declare an emergency in a deteriorating situation.
PA.VIII.C.R3	Collision hazards, to include aircraft, terrain, obstacles, and wires.
PA.VIII.C.R4	Distractions, loss of situational awareness, or improper task management.
Skills	The applicant demonstrates the ability to:
PA.VIII.C.S1	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.
PA.VIII.C.S2	Descend at a constant airspeed to specific altitudes in straight flight and turns.
PA.VIII.C.S3	Level off at the assigned altitude and maintain altitude ±200 feet, heading ±20°, and airspeed ±10 knots.

VIII. Basic Instrument Maneuvers

Task ***D. Turns to Headings***
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:
PA.VIII.D.K1 Flight instruments as related to:
PA.VIII.D.K1a a. Sensitivity, limitations, and potential errors in unusual attitudes
PA.VIII.D.K1b b. Correlation (pitch instruments/bank instruments)
PA.VIII.D.K1c c. Function and operation
PA.VIII.D.K1d d. Proper instrument cross-check techniques

Risk Management The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.VIII.D.R1 Instrument flying hazards to include failure to maintain VFR, spatial disorientation, loss of control, fatigue, stress, and emergency off airport landings.
PA.VIII.D.R2 Failure to seek assistance or declare an emergency in a deteriorating situation.
PA.VIII.D.R3 Collision hazards, to include aircraft, terrain, obstacles, and wires.
PA.VIII.D.R4 Distractions, loss of situational awareness, or improper task management.

Skills The applicant demonstrates the ability to:
PA.VIII.D.S1 Turn to headings, maintain altitude ±200 feet, maintain a standard rate turn, roll out on the assigned heading ±10°, and maintain airspeed ±10 knots.

VIII. Basic Instrument Maneuvers

Task	***E. Recovery from Unusual Flight Attitudes***
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:
PA.VIII.E.K1	Flight instruments as related to:
PA.VIII.E.K1a	a. Sensitivity, limitations, and potential errors in unusual attitudes
PA.VIII.E.K1b	b. Correlation (pitch instruments/bank instruments)
PA.VIII.E.K1c	c. Function and operation
PA.VIII.E.K1d	d. Proper instrument cross-check techniques
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.VIII.E.R1	Instrument flying hazards to include failure to maintain VFR, spatial disorientation, loss of control, fatigue, stress, and emergency off airport landings.
PA.VIII.E.R2	Failure to seek assistance or declare an emergency in a deteriorating situation.
PA.VIII.E.R3	Collision hazards, to include aircraft, terrain, obstacles, and wires.
PA.VIII.E.R4	Distractions, loss of situational awareness, or improper task management.
PA.VIII.E.R5	Failure to interpret flight instruments.
PA.VIII.E.R6	Failure to unload the wings in recovering from high G situations.
PA.VII.E.R7	Exceeding the operating envelope during the recovery.
Skills	The applicant demonstrates the ability to:
PA.VIII.E.S1	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.

VIII. Basic Instrument Maneuvers

Task	***F. Radio Communications, Navigation Systems/Facilities, and Radar Services***
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:
PA.VIII.F.K1	Operating communications equipment to include identifying and selecting radio frequencies, requesting and following ATC instructions.
PA.VIII.F.K2	Operating navigation equipment to include functions and displays, and following bearings, radials, or courses.
PA.VIII.F.K3	Air traffic control facilities and services.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.VIII.F.R1	Failure to seek assistance or declare an emergency in a deteriorating situation.
PA.VIII.F.R2	Failure to utilize all available resources (e.g., automation, ATC, and flight deck planning aids).
Skills	The applicant demonstrates the ability to:
PA.VIII.F.S1	Maintain airplane control while selecting proper communications frequencies, identifying the appropriate facility, and managing navigation equipment.
PA.VIII.F.S2	Comply with ATC instructions.
PA.VIII.F.S3	Maintain altitude ±200 feet, heading ±20°, 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:
PA.IX.A.K1	Situations that would require an emergency descent (e.g., depressurization, smoke, or engine fire).
PA.IX.A.K2	Immediate action items and emergency procedures.
PA.IX.A.K3	Airspeed, to include airspeed limitations.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.IX.A.R1	Failure to consider altitude, wind, terrain, obstructions, and available glide distance.
PA.IX.A.R2	Collision hazards, to include aircraft, terrain, obstacles, and wires.
PA.IX.A.R3	Improper airplane configuration.
PA.IX.A.R4	Distractions, loss of situational awareness, or improper task management.
Skills	The applicant demonstrates the ability to:
PA.IX.A.S1	Clear the area.
PA.IX.A.S2	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.
PA.IX.A.S3	Maintain orientation, divide attention appropriately, and plan and execute a smooth recovery.
PA.IX.A.S4	Use bank angle between 30° and 45° to maintain positive load factors during the descent.
PA.IX.A.S5	Maintain appropriate airspeed +0/-10 knots, and level off at a specified altitude ±100 feet.
PA.IX.A.S6	Complete the appropriate checklist.

IX. Emergency Operations

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:
PA.IX.B.K1 Immediate action items and emergency procedures.
PA.IX.B.K2 Airspeed, to include:
PA.IX.B.K2a a. Importance of best glide speed and its relationship to distance
PA.IX.B.K2b b. Difference between best glide speed and minimum sink speed
PA.IX.B.K2c c. Effects of wind on glide distance
PA.IX.B.K3 Effects of atmospheric conditions on emergency approach and landing.
PA.IX.B.K4 A stabilized approach, to include energy management concepts.
PA.IX.B.K5 ELTs and other emergency locating devices.
PA.IX.B.K6 ATC services to aircraft in distress.

Risk Management The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
PA.IX.B.R1 Failure to consider altitude, wind, terrain, obstructions, gliding distance, and available landing distance.
PA.IX.B.R2 Failure to plan and follow a flightpath to the selected landing area.
PA.IX.B.R3 Collision hazards, to include aircraft, terrain, obstacles, and wires.
PA.IX.B.R4 Improper airplane configuration.
PA.IX.B.R5 Low altitude maneuvering including stall, spin, or CFIT.
PA.IX.B.R6 Distractions, loss of situational awareness, or improper task management.

Skills The applicant demonstrates the ability to:
PA.IX.B.S1 Establish and maintain the recommended best glide airspeed, ±10 knots.
PA.IX.B.S2 Configure the airplane in accordance with the POH/AFM and existing conditions.
PA.IX.B.S3 Select a suitable landing area considering altitude, wind, terrain, obstructions, and available glide distance.
PA.IX.B.S4 Plan and follow a flightpath to the selected landing area considering altitude, wind, terrain, and obstructions.
PA.IX.B.S5 Prepare for landing as specified by the evaluator.
PA.IX.B.S6 Complete the appropriate checklist.

IX. Emergency Operations

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:
PA.IX.C.K1 Partial or complete power loss related to the specific powerplant, including:
PA.IX.C.K1a a. Engine roughness or overheat
PA.IX.C.K1b b. Carburetor or induction icing
PA.IX.C.K1c c. Loss of oil pressure
PA.IX.C.K1d d. Fuel starvation
PA.IX.C.K2 System and equipment malfunctions specific to the airplane, including:
PA.IX.C.K2a a. Electrical malfunction
PA.IX.C.K2b b. Vacuum/pressure and associated flight instrument malfunctions
PA.IX.C.K2c c. Pitot/static system malfunction
PA.IX.C.K2d d. Electronic flight deck display malfunction
PA.IX.C.K2e e. Landing gear or flap malfunction
PA.IX.C.K2f f. Inoperative trim
PA.IX.C.K3 Smoke/fire/engine compartment fire.
PA.IX.C.K4 Any other system specific to the airplane (e.g., supplemental oxygen, deicing).
PA.IX.C.K5 Inadvertent door or window opening.

Risk Management The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.IX.C.R1 Failure to use the proper checklist for a system or equipment malfunction.
PA.IX.C.R2 Distractions, loss of situational awareness, or improper task management.

Skills The applicant demonstrates the ability to:
PA.IX.C.S1 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.
PA.IX.C.S2 Complete the appropriate checklist.

IX. Emergency Operations

Task	***D. Emergency Equipment and Survival Gear***
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:
PA.IX.D.K1	Emergency Locator Transmitter (ELT) operations, limitations, and testing requirements.
PA.IX.D.K2	Fire extinguisher operations and limitations.
PA.IX.D.K3	Emergency equipment and survival gear needed for:
PA.IX.D.K3a	a. Climate extremes (hot/cold)
PA.IX.D.K3b	b. Mountainous terrain
PA.IX.D.K3c	c. Overwater operations
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.IX.D.R1	Failure to plan for basic needs (water, clothing, shelter) for 48 to 72 hours.
Skills	The applicant demonstrates the ability to:
PA.IX.D.S1	Identify appropriate equipment and personal gear.
PA.IX.D.S2	Brief passengers on proper use of on-board emergency equipment and survival gear.

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:
PA.XI.A.K1	Physiological aspects of vision related to night flying.
PA.XI.A.K2	Lighting systems identifying airports, runways, taxiways and obstructions, as well as pilot controlled lighting.
PA.XI.A.K3	Airplane equipment and lighting requirements for night operations.
PA.XI.A.K4	Personal equipment essential for night flight.
PA.XI.A.K5	Night orientation, navigation, and chart reading techniques.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.XI.A.R1	Collision hazards, to include aircraft, terrain, obstacles, and wires.
PA.XI.A.R2	Distractions, loss of situational awareness, or improper task management.
PA.XI.A.R3	Hazards specific to night flying.
Skills	*N/A*

Note: *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.*

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:
PA.XII.A.K1	Airplane shutdown, securing, and postflight inspection.
PA.XII.A.K2	Documenting in-flight/postflight discrepancies.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.XII.A.R1	Inappropriate activities and distractions.
PA.XII.A.R2	Confirmation or expectation bias as related to taxi instructions.
PA.XII.A.R3	Airport specific security procedures.
PA.XII.A.R4	Disembarking passengers.
Skills	The applicant demonstrates the ability to:
PA.XII.A.S1	Utilize runway incursion avoidance procedures.
PA.XII.A.S2	Park in an appropriate area, considering the safety of nearby persons and property.
PA.XII.A.S3	Complete the appropriate checklist.
PA.XII.A.S4	Conduct a postflight inspection and document discrepancies and servicing requirements, if any.
PA.XII.A.S5	Secure the airplane.

Appendix 3: Airman Knowledge Test Report

FAA Knowledge Test Question Coding

Each Task in the ACS includes an ACS code. This ACS code will ultimately be displayed on the Airmans Knowledge Test Report to indicate what Task element was proven deficient on the knowledge test. Instructors can then provide remedial training in the deficient areas, and evaluators can re-test this element during the practical test.

The ACS coding consists of four elements. For example, this code is interpreted as follows:

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 correspond to the ACS codes, which will ultimately replace the system of Learning Statement Codes (LSC). After this transition occurs, the 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. Applicants and evaluators should interpret the codes using the ACS revision in effect on the date of the knowledge test

However, for knowledge tests taken before this system comes on line, only the LSC code (e.g., “PLT058”) will be displayed on the AKTR. The LSC codes link to references and broad subject areas. By contrast, each ACS code represents a unique Task element in the ACS. Because of this fundamental difference, there is no one-to-one correlation between Learning Statement (PLT) codes and ACS codes.

Because all active knowledge test questions for the Private Pilot Airplane Knowledge Test (PAR) now align with this ACS, evaluators can use LSC codes in conjunction with this ACS for targeted retesting of missed knowledge subject areas. The evaluator should look up the LSC code(s) on the applicant’s AKTR in the 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 to the appropriate ACS Area(s) of Operation and Task(s). Evaluators must verify the applicant has sufficient knowledge in those areas associated with incorrect responses on the knowledge test.

Appendix 4: The Practical Test – Eligibility and Prerequisites

The prerequisite requirements and general eligibility for a practical test and the specific requirements for the original issuance of a Private Pilot Certificate in the airplane category can be found in 14 CFR part 61, sections 61.39(a) (1) through (7) and 61.103.

Appendix 5: Practical Test Roles, Responsibilities, and Outcomes

Applicant Responsibilities

The applicant is responsible for mastering the established standards for knowledge, skill, and risk management elements in all Tasks appropriate to the certificate and rating sought. The applicant should use this ACS, its references, and the Practical Test Checklist in this Appendix in preparation to take the practical test.

Instructor Responsibilities

The instructor is responsible for training the applicant to meet the established standards for knowledge, skill, and risk management elements in all Tasks appropriate to the certificate and rating sought. The instructor should use this ACS and its references as part of preparing the applicant to take the practical test and, if necessary, in retraining the applicant to proficiency in all subject(s) missed on the knowledge test.

Evaluator Responsibilities

The evaluator who conducts the practical test is responsible for determining that the applicant meets the

established standards of aeronautical knowledge, skills (flight proficiency), and risk management for the Tasks in the appropriate ACS. This responsibility also includes verifying the experience requirements specified for a certificate or rating.

Prior to beginning the practical test, the evaluator must also determine that the applicant meets FAA Aviation English Language Proficiency Standard. An applicant for an FAA certificate or rating should be able to communicate in English in a discernible and understandable manner with ATC, pilots, and others involved in preparing an aircraft for flight and operating an aircraft in flight. This communication may or may not involve the use of the radio. An applicant for an FAA certificate issued in accordance with part 61, 63, 65, or 107 who cannot hear or speak due to a medical deficiency may be eligible for an FAA certificate with specific operational limitations. For additional guidance, reference AC 60-28, English Language Skill Standards required by 14 CFR parts 61, 63, 65, and 107, as amended.

The evaluator must develop a Plan of Action (POA), written in English, to conduct the practical test, and it must include all of the required Areas of Operation and Tasks. The POA must include a scenario that evaluates as many of the required Areas of Operation and Tasks as possible. As the scenario unfolds during the test, the evaluator will introduce problems and emergencies that the applicant must manage. The evaluator has the discretion to modify the POA in order to accommodate unexpected situations as they arise. For example, the evaluator may elect to suspend and later resume a scenario in order to assess certain Tasks.

In the integrated ACS framework, the Areas of Operation contain Tasks that include “knowledge” elements (such as K1), “risk management” elements (such as R1), and “skill” elements (such as S1). Knowledge and risk management elements are primarily evaluated during the knowledge testing phase of the airman certification process. The evaluator must assess the applicant on all skill elements for each Task included in each Area of Operation of the ACS, unless otherwise noted. The evaluator administering the practical test has the discretion to combine Tasks/elements as appropriate to testing scenarios.

The required minimum elements to include in the POA, unless otherwise noted, from each applicable Task are as follows:

- at least one knowledge element;
- at least one risk management element;
- all skill elements; and
- any Task elements in which the applicant was shown to be deficient on the knowledge test.

Note: *Task elements added to the POA on the basis of being listed on the AKTR may satisfy the other minimum Task element requirements. The missed items on the AKTR are not required to be added in addition to the minimum Task element requirements.*

There is no expectation for testing every knowledge and risk management element in a Task, but the evaluator has discretion to sample as needed to ensure the applicant’s mastery of that Task.

Unless otherwise noted in the Task, the evaluator must test each item in the skills section by asking the applicant to perform each one. As safety of flight conditions permit, the evaluator should use questions during flight to test knowledge and risk management elements not evident in the demonstrated skills. To the greatest extent practicable, evaluators should test the applicant’s ability to apply and correlate information, and use rote questions only when they are appropriate for the material being tested. If the Task includes an element with sub-elements, the evaluator may choose the primary element and select at least one sub-element to satisfy the requirement that at least one knowledge element be selected. For example, if the evaluator chooses PA.I.H.K1, he or she must select a sub-element like PA.I.H.K1e to satisfy the requirement to select one knowledge element.

Possible Outcomes of the Test

There are three possible outcomes of the practical test: (1) Temporary Airman Certificate (satisfactory), (2) Notice of Disapproval (unsatisfactory), or (3) Letter of Discontinuance.

If the evaluator determines that a Task is incomplete, or the outcome is uncertain, the evaluator must require the applicant to repeat that Task, or portions of that Task. This provision does not mean that instruction, practice, or the repetition of an unsatisfactory Task is permitted during the practical test.

If the outcome is unsatisfactory, the evaluator must issue a Notice of Disapproval.

Satisfactory Performance

In accordance with 14 CFR part 61, section 61.43, satisfactory performance requires that the applicant:

- Demonstrate the Tasks specified in the Areas of Operation for the certificate or rating sought within the established standards;
- Demonstrate mastery of the aircraft by performing each Task successfully;
- Demonstrate proficiency and competency in accordance with the approved standards;
- Demonstrate sound judgment and exercise aeronautical decision-making/risk management; and

The applicant is expected to demonstrate competence in resource management (CRM/SRM) appropriate to the aircraft and Tasks.

Satisfactory performance will result in the issuance of a temporary certificate.

Unsatisfactory Performance

Typical areas of unsatisfactory performance and grounds for disqualification include:

- Any action or lack of action by the applicant that requires corrective intervention by the evaluator to maintain safe flight.
- Failure to use proper and effective visual scanning techniques to clear the area before and while performing maneuvers.
- Consistently exceeding tolerances stated in the skill elements of the Task.
- Failure to take prompt corrective action when tolerances are exceeded.
- Failure to exercise risk management.

If, in the judgment of the evaluator, the applicant does not meet the standards for any Task, the applicant fails the Task and associated Area of Operation. The test is unsatisfactory, and the evaluator issues a Notice of Disapproval. The evaluator lists the Area(s) of Operation in which the applicant did not meet the standard, any Area(s) of Operation not tested, and the number of practical test failures. The evaluator should also list the Tasks failed or Tasks not tested within any unsatisfactory or partially completed Area(s) of Operation. If the applicant's inability to meet English language requirements contributed to the failure of a Task, the evaluator must note "English Proficiency" on the Notice of Disapproval.

The evaluator or the applicant may end the test if the applicant fails a Task. The evaluator may continue the test only with the consent of the applicant. The applicant is entitled to credit only for those Areas of Operation and the associated Tasks performed satisfactorily.

Discontinuance

When it is necessary to discontinue a practical test for reasons other than unsatisfactory performance (e.g., equipment failure, weather, illness), the evaluator must return all test paperwork to the applicant. The evaluator must prepare, sign, and issue a Letter of Discontinuance that lists those Areas of Operation the applicant successfully completed and the time period remaining to complete the test. The evaluator should advise the applicant to present the Letter of Discontinuance to the evaluator when the practical test resumes in order to receive credit for the items successfully completed. The Letter of Discontinuance becomes part of the applicant's certification file.

Testing after Discontinuance or Unsatisfactory Performance

In accordance with 14 CFR part 61, section 61.39(f), a discontinued or unsatisfactory practical test cycle completes within two calendar months after the month the applicant begins the test. In addition and in accordance with section 61.43(f), an applicant may receive credit for items passed, but only within a 60-day period after the date of a first failure or Letter of Discontinuance. When an applicant is entitled to credit for Areas of Operation previously passed as indicated on a Notice of Disapproval or Letter of Discontinuance, evaluators should continue using the PTS/ACS effective on the start date of the test cycle. The evaluator has discretion to reevaluate any Task(s) successfully completed within a failed or partially tested Area of Operation.

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.

Appendix 7: Aircraft, Equipment, and Operational Requirements & Limitations

Aircraft Requirements & Limitations

14 CFR part 61, section 61.45 prescribes the required aircraft and equipment for a practical test. The regulation states the minimum aircraft registration and airworthiness requirements as well as the minimum equipment requirements, to include the minimum required controls.

If the aircraft presented for the practical test has inoperative instruments or equipment, it must be addressed in accordance with 14 CFR part 91, section 91.213. If the aircraft can be operated in accordance with 14 CFR part 91, section 91.213, then it must be determined if the inoperative instruments or equipment are required to complete the practical test.

Equipment Requirements & Limitations

The equipment examination should be administered before the flight portion of the practical test, but it must be closely coordinated and related to the flight portion.

The aircraft must meet the requirements as outlined in 14 CFR part 61, section 61.45.

To assist in management of the aircraft during the practical test, the applicant is expected to demonstrate automation management skills by utilizing installed, available, or airborne equipment such as autopilot, avionics and systems displays, and/or a flight management system (FMS). The evaluator is expected to test the applicant's knowledge of the systems that are available or installed and operative during both the ground and flight portions of the practical test. If the applicant has trained using a portable EFB to display charts and data, and wishes to use the EFB during the practical test, the applicant is expected to demonstrate appropriate knowledge, risk management, and skill.

If the practical test is conducted in an aircraft, the applicant is required by 14 CFR part 61, section 61.45(d)(2) to provide an appropriate view limiting device acceptable to the evaluator. The applicant and the evaluator should establish a procedure as to when and how this device should be donned and removed, and brief this procedure before the flight. The device must be used during all testing that requires flight "solely by reference to instruments" included as part of the Task objective. This device must prevent the applicant from having visual reference outside the aircraft, but it must not restrict the evaluator's ability to see and avoid other traffic. The use of the device does not apply to specific elements within a Task when there is a requirement for visual references.

Operational Requirements, Limitations, & Task Information

V. Performance and Ground Reference Maneuvers

Task B. Ground Reference Maneuvers

As noted in the skill elements, the evaluator must choose at least one maneuver for the applicant to demonstrate:

- Rectangular course
- S-Turns
- Turns around a point

VII. Slow Flight and Stalls

Task A. Maneuvering During Slow Flight

Evaluation criteria for this Task should recognize that environmental factors (e.g., turbulence) may result in a momentary activation of stall warning indicators such as the stall horn. If the applicant recognizes the stall warning indication and promptly makes an appropriate correction, a momentary activation does not constitute unsatisfactory performance on this Task. As with other Tasks, unsatisfactory performance would arise from an applicant's continual deviation from the standard, lack of correction, and/or lack of recognition.

Task B. Power-Off Stalls

Evaluation criteria for a recovery from an approach to stall should not mandate a predetermined value for altitude loss and should not mandate maintaining altitude during recovery. Proper evaluation criteria should consider the multitude of external and internal variables that affect the recovery altitude.

Task C. Power-On Stalls

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. Evaluation criteria for a recovery from an approach to stall should not mandate a predetermined value for altitude loss and should not mandate maintaining altitude during recovery. Proper evaluation criteria should consider the multitude of external and internal variables that affect the recovery altitude.

Appendix 9: References

This ACS is based on the following 14 CFR parts, FAA guidance documents, manufacturer's publications, and other documents.

14 CFR part 39	Airworthiness Directives
14 CFR part 43	Maintenance, Preventive Maintenance, Rebuilding and Alteration
14 CFR part 61	Certification: Pilots, Flight Instructors, and Ground Instructors
14 CFR part 68	Requirements for Operating Certain Small Aircraft Without a Medical Certificate
14 CFR part 71	Designation of Class A, B, C, D and E Airspace Areas; Air Traffic Service Routes; and Reporting Points
14 CFR part 91	General Operating and Flight Rules
14 CFR part 93	Special Air Traffic Rules
AC 00-6	Aviation Weather
AC 00-45	Aviation Weather Services
AC 60-28	English Language Skill Standards Required by 14 CFR
AC 61-67	Stall and Spin Awareness Training
AC 91-73	Parts 91 and 135 Single Pilot, Flight School Procedures During Taxi Operations
AC 68-1	Alternative Pilot Physical Examination and Education Requirements
AC 91.21-1	Use of Portable Electronic Devices Aboard Aircraft
AIM	Aeronautical Information Manual
FAA-H-8083-1	Aircraft Weight and Balance Handbook
FAA-H-8083-2	Risk Management Handbook
FAA-H-8083-3	Airplane Flying Handbook
FAA-H-8083-6	Advanced Avionics Handbook
FAA-H-8083-15	Instrument Flying Handbook
FAA-H-8083-23	Seaplane, Skiplane, and Float/Ski Equipped Helicopter Operations Handbook
FAA-H-8083-25	Pilot's Handbook of Aeronautical Knowledge
FAA-P-8740-66	Flying Light Twins Safely Pamphlet
POH/AFM	Pilot's Operating Handbook/FAA-Approved Airplane Flight Manual
Other	Chart Supplements
	Navigation Charts
	Navigation Equipment Manual
	USCG Navigation Rules, International-Inland
	NOTAMs

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 (when applicable)
- ☐ 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)