COMPARISON BOOKLET FOR AIRPLANE SINGLE ENGINE LAND PRACTICAL TEST STANDARDS

FAA-S-8081-14A - PRIVATE

FAA-S-8081-14B - PRIVATE

FAA-S-8081-12B - COMMERCIAL

FAA-S-8081-12C - COMMERCIAL

Effective through May2012

Effective June 1, 2012

Prepared by June Bonesteel

COMPARISON OF SUPERSEDED PRIVATE PTS AND THE CURRENT PRIVATE PTS THAT BECAME EFFECTIVE JUNE 1, 2012

SUPERSEDED PRIVATE PTS

I. AREA OF OPERATION: PREFLIGHT PREPARATION

NOTE: The examiner shall develop a scenario based on real time weather to evaluate TASKs C and D.

A. TASK: CERTIFICATES AND DOCUMENTS (ASEL and ASES)

REFERENCES: 14 CFR parts 43, 61, 91; FAA-H-8083-3, AC 61-23/FAAH-8083-25; POH/AFM.

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

1. Explaining—

a. private pilot certificate privileges, limitations, and recent flight experience requirements.
b. medical certificate class and duration.
c. pilot logbook or flight records.

2. Locating and explaining—

a. airworthiness and registration certificates.
b. operating limitations, placards, instrument markings, and POH/AFM.
c. weight and balance data and equipment list.

I. AREA OF OPERATION: PREFLIGHT PREPARATION

NOTE: *The examiner shall develop a scenario based on real time weather to evaluate Tasks C and D.*

TASK A: CERTIFICATES AND DOCUMENTS (ASEL and ASES)

References: 14 CFR parts **39**, 43, 61, 91; FAA-H-8083-3, FAA-H-8083-23, FAA-H-8083-25; POH/AFM.

Objective: To determine that the applicant exhibits **satisfactory** knowledge of the elements related to certificates and documents by:

1. Explaining—

- **a.** private pilot certificate privileges, limitations, and recent flight experience requirements.
- **b.** medical certificate class and duration.
- **c.** pilot logbook or flight records.

2. Locating and explaining—

- **a.** airworthiness and registration certificates.
- **b.** operating limitations, placards, instrument markings, and POH/AFM.
- **c.** weight and balance data and equipment list.

SUPERSEDED PRIVATE PTS

I. AREA OF OPERATION: PREFLIGHT PREPARATION

B. TASK: AIRWORTHINESS REQUIREMENTS (ASEL and ASES)

REFERENCES: 14 CFR part 91; AC 61-23/FAA-H-8083-25.

Objective. To determine that the applicant exhibits knowledge of the elements related to airworthiness requirements by:

1. Explaining—

- **a.** required instruments and equipment for day/night VFR.
- **b.** procedures and limitations for determining airworthiness of the airplane with inoperative instruments and equipment with and without an MEL.
- **c.** requirements and procedures for obtaining a special flight permit.

2. Locating and explaining—

- **a.** airworthiness directives.
- **b.** compliance records.
- **c.** maintenance/inspection requirements.
- **d.** appropriate record keeping.

I. AREA OF OPERATION: PREFLIGHT PREPARATION

TASK B: AIRWORTHINESS REQUIREMENTS (ASEL and ASES)

References: 14 CFR parts **39**, 91; FAA-H-8083-25.

Objective: To determine that the applicant exhibits **satisfactory** knowledge of the elements related to airworthiness requirements by:

1. Explaining—

a. required instruments and equipment for day/night VFR.
b. procedures and limitations for determining airworthiness of the airplane with inoperative instruments and equipment with and without an MEL.
c. requirements and procedures for obtaining a special flight permit.

2. Locating and explaining—

a. airworthiness directives.
b. compliance records.
c. maintenance/inspection requirements.
d. appropriate record keeping.

SUPERSEDED PRIVATE PTS

I. AREA OF OPERATION: PREFLIGHT PREPARATION

C. TASK: WEATHER INFORMATION (ASEL and ASES)

REFERENCES: 14 CFR part 91; AC 00-6, AC 00-45, AC 61-23/FAA-H-8083-25, AC 61-84; AIM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to weather information by analyzing weather reports, charts, and forecasts from various sources with emphasis on—

- **a.** METAR, TAF, and FA.
- **b.** surface analysis chart.
- **c.** radar summary chart.
- **d.** winds and temperature aloft chart.
- **e.** significant weather prognostic charts.
- **f.** convective outlook chart.
- **g.** AWOS, ASOS, and ATIS reports.

2. Makes a competent "go/no-go" decision based on available weather information.

I. AREA OF OPERATION: PREFLIGHT PREPARATION

TASK C: WEATHER INFORMATION (ASEL and ASES)

References: 14 CFR part 91; AC 00-6, AC 00-45, AC 61-84; FAAH-8083-25; AIM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to weather information by analyzing weather reports, charts, and forecasts from various sources with emphasis on—
   - **a.** METAR, TAF, and FA.
   - **b.** surface analysis chart.
   - **c.** radar summary chart.
   - **d.** winds and temperature aloft chart.
   - **e.** significant weather prognostic charts.
   - **f.** convective outlook chart.
   - **g.** AWOS, ASOS, and ATIS reports.
   - **h. SIGMETs and AIRMETs.**
   - **i. PIREPs.**
   - **j. windshear reports.**
   - **k. icing and freezing level information.**
2. Makes a competent “go/no-go” decision based on available weather information.

I. AREA OF OPERATION: PREFLIGHT PREPARATION

D. TASK: CROSS-COUNTRY FLIGHT PLANNING (ASEL and ASES)

REFERENCES: 14 CFR part 91; AC 61-23/FAA-H-8083-25, AC 61-84; Navigation Charts; A/FD; AIM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to cross-country flight planning by presenting and explaining a pre-planned VFR cross-country flight, as previously assigned by the examiner. On the day of the practical test, the final flight plan shall be to the first fuel stop, based on maximum allowable passengers, baggage, and/or cargo loads using real-time weather.
2. Uses appropriate and current aeronautical charts.
3. Properly identifies airspace, obstructions, and terrain features.
4. Selects easily identifiable en route checkpoints.
5. Selects most favorable altitudes considering weather conditions and equipment capabilities.
6. Computes headings, flight time, and fuel requirements.
7. Selects appropriate navigation system/facilities and communication frequencies.
8. Applies pertinent information from NOTAMs, AF/D, and other flight publications.
9. Completes a navigation log and simulates filing a VFR flight plan.

I. AREA OF OPERATION: PREFLIGHT PREPARATION

TASK D: CROSS-COUNTRY FLIGHT PLANNING (ASEL and ASES)

References: 14 CFR part 91; FAA-H-8083-25; AC 61-84; Navigation Charts; AFD; AIM; **NOTAMS.**

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to cross-country flight planning by presenting and explaining a pre-planned VFR cross-country flight, as previously assigned by the examiner. On the day of the practical test, the final flight plan shall be to the first fuel stop, based on maximum allowable passengers, baggage, and/or cargo loads using real-time weather.
2. Uses appropriate and current aeronautical charts.
3. Properly identifies airspace, obstructions, and terrain features.
4. Selects easily identifiable en route checkpoints.
5. Selects most favorable altitudes considering weather conditions and equipment capabilities.
6. Computes headings, flight time, and fuel requirements.
7. Selects appropriate navigation system/facilities and communication frequencies.
8. **Applies pertinent information from AFD, NOTAMs, and NOTAMS relative to airport, runway and taxiway closures, and other flight publications.**
9. Completes a navigation log and simulates filing a VFR flight plan.

I. AREA OF OPERATION: PREFLIGHT PREPARATION

E. TASK: NATIONAL AIRSPACE SYSTEM (ASEL and ASES)

REFERENCES: 14 CFR parts 71, 91; Navigation Charts; AIM.

Objective. To determine that the applicant exhibits knowledge of the elements related to the National Airspace System by explaining:

1. Basic VFR weather minimums—for all classes of airspace.

2. Airspace classes—their operating rules, pilot certification, and airplane equipment requirements for the following—

- **a.** Class A.
- **b.** Class B.
- **c.** Class C.
- **d.** Class D.
- **e.** Class E.
- **f.** Class G.

3. Special use and other airspace areas.

I. AREA OF OPERATION: PREFLIGHT PREPARATION

TASK E: NATIONAL AIRSPACE SYSTEM (ASEL and ASES)

References: 14 CFR parts 71, 91, 93; Navigation Charts; AIM.

Objective: To determine that the applicant exhibits **satisfactory** knowledge of the elements related to the National Airspace System by explaining:

1. Basic VFR weather minimums—for all classes of airspace.
2. Airspace classes—their operating rules, pilot certification, and airplane equipment requirements for the following—
   - **a.** Class A.
   - **b.** Class B.
   - **c.** Class C.
   - **d.** Class D.
   - **e.** Class E.
   - **f.** Class G.
3. Special use, **special flight rules areas**, and other airspace areas.

I. AREA OF OPERATION: PREFLIGHT PREPARATION

F. TASK: PERFORMANCE AND LIMITATIONS (ASEL and ASES)

REFERENCES: AC 61-23/FAA-H-8083-25, FAA-H-8083-1, AC 61-84, POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to performance and limitations by explaining the use of charts, tables, and data to determine performance and the adverse effects of exceeding limitations.
2. Computes weight and balance. Determines the computed weight and center of gravity is within the airplane's operating limitations and if the weight and center of gravity will remain within limits during all phases of flight.
3. Demonstrates use of the appropriate performance charts, tables, and data.
4. Describes the effects of atmospheric conditions on the airplane's performance

I. AREA OF OPERATION: PREFLIGHT PREPARATION

TASK F: PERFORMANCE and LIMITATIONS (ASEL and ASES)

References: FAA-H-8083-1, FAA-H-8083-25; AC 61-84; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to performance and limitations by explaining the use of charts, tables, and data to determine performance and the adverse effects of exceeding limitations.
2. Computes weight and balance. Determines the computed weight and center of gravity are within the airplane's operating limitations and if the weight and center of gravity will remain within limits during all phases of flight.
3. Demonstrates use of the appropriate **manufacturer's** performance charts, tables, and data.
4. Describes the effects of atmospheric conditions on the airplane's performance.

I. AREA OF OPERATION: PREFLIGHT PREPARATION

G. TASK: OPERATION OF SYSTEMS (ASEL and ASES)

REFERENCES: AC 61-23/FAA-H-8083-25; POH/AFM.

Objective. To determine that the applicant exhibits knowledge of the elements related to the operation of systems on the airplane provided for the flight test by explaining at least three (3) of the following systems.

1. Primary flight controls and trim.

2. Flaps, leading edge devices, and spoilers.

3. Water rudders (ASES).

4. Powerplant and propeller.

5. Landing gear.

6. Fuel, oil, and hydraulic.

7. Electrical.

8. Avionics

9. Pitot-static vacuum/pressure and associated flight instruments.

10. Environmental.

11. Deicing and anti-icing.

I. AREA OF OPERATION: PREFLIGHT PREPARATION

TASK G: OPERATION OF SYSTEMS (ASEL and ASES)

References: **FAA-H-8083-23**, FAA-H-8083-25; POH/AFM.

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

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

I. AREA OF OPERATION: PREFLIGHT PREPARATION

J. TASK: AEROMEDICAL FACTORS (ASEL and ASES)

REFERENCES: AC 61-23/FAA-H-8083-25; AIM.

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

1. The symptoms, causes, effects, and corrective actions of at least three (3) of the following—

- **a.** hypoxia.
- **b.** hyperventilation.
- **c.** middle ear and sinus problems.
- **d.** spatial disorientation.
- **e.** motion sickness.
- **f.** carbon monoxide poisoning.
- **g.** stress and fatigue.
- **h.** dehydration.

2. The effects of alcohol, drugs, and over-the-counter medications.

3. The effects of excesses nitrogen during scuba dives upon a pilot or passenger in flight.

I. AREA OF OPERATION: PREFLIGHT PREPARATION

TASK J: AEROMEDICAL FACTORS (ASEL and ASES)

References: FAA-H-8083-25; AIM.

Objective: To determine that the applicant exhibits **satisfactory** knowledge of the elements related to aeromedical factors by explaining:

1. The symptoms, causes, effects, and corrective actions of at least three of the following—
    - **a.** hypoxia.
    - **b.** hyperventilation.
    - **c.** middle ear and sinus problems.
    - **d.** spatial disorientation
    - **e.** motion sickness.
    - **f.** carbon monoxide poisoning.
    - **g.** stress and fatigue.
    - **h.** dehydration.
2. The effects of alcohol, drugs, and over-the-counter medications.
3. The effects of excess nitrogen during scuba dives upon a pilot or passenger in flight.

II. AREA OF OPERATION: PREFLIGHT PROCEDURES

A. TASK: PREFLIGHT INSPECTION (ASEL and ASES)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to preflight inspection. This **shall include** which items must be inspected, the reasons for checking each item, and how to detect possible defects.
2. Inspects the airplane with reference to an appropriate checklist.
3. Verifies the airplane is in condition for safe flight.

II. AREA OF OPERATION: PREFLIGHT PROCEDURES

TASK A: PREFLIGHT INSPECTION (ASEL and ASES)

References: FAA-H-8083-3, **FAA-H-8083-23**; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to preflight inspection. This **shall include** which items must be inspected, the reasons for checking each item, and how to detect possible defects.
2. Inspects the airplane with reference to an appropriate checklist.
3. Verifies the airplane is in condition for safe flight.

II. AREA OF OPERATION: PREFLIGHT PROCEDURES

B. TASK: COCKPIT MANAGEMENT (ASEL and ASES)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to cockpit management procedures.
2. Ensures all loose items in the cockpit and cabin are secured.
3. Organizes material and equipment in an efficient manner so they are readily available.
4. Briefs occupants on the use of safety belts, shoulder harnesses, doors, and emergency procedures.

II. AREA OF OPERATION: PREFLIGHT PROCEDURES

TASK B: COCKPIT MANAGEMENT (ASEL and ASES)

References: FAA-H-8083-3; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to cockpit management procedures.
2. Ensures all loose items in the cockpit and cabin are secured.
3. Organizes material and equipment in an efficient manner so they are readily available.
4. Briefs occupants on the use of safety belts, shoulder harnesses, doors, and emergency procedures

II. AREA OF OPERATION: PREFLIGHT PROCEDURES

C. TASK: ENGINE STARTING (ASEL and ASES)

REFERENCES: FAA-H-8083-3, AC 61-23/FAA-H-8083-25, AC 91-13, AC 91-55; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to recommended engine starting procedures. This **shall include** the use of an external power source, hand propping safety, and starting under various atmospheric conditions.
2. Positions the airplane properly considering structures, surface conditions, other aircraft, and the safety of nearby persons and property.
3. Utilizes the appropriate checklist for starting procedure.

II. AREA OF OPERATION: PREFLIGHT PROCEDURES

TASK C: ENGINE STARTING (ASEL and ASES)

References: FAA-H-8083-3, **FAA-H-8083-23**, FAA-H-8083-25; AC 91-13, AC 91-55; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to recommended engine starting procedures. This **shall include** the use of an external power source, hand propping safety, and starting under various atmospheric conditions.
2. Positions the airplane properly considering structures, surface conditions, other aircraft, and the safety of nearby persons and property.
3. Utilizes the appropriate checklist for starting procedure.

II. AREA OF OPERATION: PREFLIGHT PROCEDURES

D. TASK: TAXIING (ASEL)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to safe taxi procedures.

2. Performs a brake check immediately after the airplane begins moving.

3. Positions the flight controls properly for the existing wind conditions.

4. Controls direction and speed without excessive use of brakes.

5. Complies with airport/taxiway markings, signals, ATC clearances, and instructions.

6. Taxies so as to avoid other aircraft and hazards.

II. AREA OF OPERATION: PREFLIGHT PROCEDURES

TASK D: TAXIING (ASEL)

References: FAA-H-8083-3; POH/AFM.

Objective: To determine that the applicant:

1. **Exhibits satisfactory knowledge of the elements related to safe taxi procedures at towered and non-towered airports**
2. **Performs a brake check immediately after the airplane begins moving.**
3. Positions the flight controls properly for the existing wind conditions.
4. Controls direction and speed without excessive use of brakes.
5. **Exhibits procedures for steering, maneuvering, maintaining taxiway, runway position, and situational awareness to avoid runway incursions.**
6. **Exhibits proper positioning of the aircraft relative to hold lines.**
7. **Exhibits procedures to insure clearances/instructions are received and recorded/read back correctly.**
8. **Exhibits situational awareness/taxi procedures in the event the aircraft is on a taxiway that is between parallel runways.**
9. **Uses a taxi chart during taxi.**
10. Complies with airport/taxiway markings, signals, ATC clearances and instructions.
11. Utilizes procedures for eliminating pilot distractions.
12. Taxiing to avoid other aircraft/vehicles and hazards.

SUPERSEDED PRIVATE PTS

Runway Incursion Avoidance is a new task and was not in this PTS that was recently superseded.

II. AREA OF OPERATION: PREFLIGHT PROCEDURES

TASK F: RUNWAY INCURSION AVOIDANCE (ASEL and ASES)

References: FAA-H-8083-3, FAA-H-8083-25; AC 91-73, AC 150-5340-18; AIM.

Objective: To determine that the applicant exhibits knowledge of the elements of runway incursion avoidance by:

1. Exhibiting distinct challenges and requirements during taxi operations not found in other phases of flight operations.
2. Exhibiting procedures for appropriate cockpit activities during taxiing including taxi route planning, briefing the location of HOT SPOTS, communicating and coordinating with ATC.
3. Exhibiting procedures for steering, maneuvering, maintaining taxiway, runway position, and situational awareness.
4. Knowing the relevance/importance of hold lines.
5. Exhibiting procedures to ensure the pilot maintains strict focus to the movement of the aircraft and ATC communications, including the elimination of all distractive activities (i.e. cell phone, texting, conversations with passengers) during aircraft taxi, takeoff and climb out to cruise altitude.
6. Utilizing procedures for holding the pilot's workload to a minimum during taxi operations.
7. Utilizing taxi operation planning procedures, such as recording taxi instructions, reading back taxi clearances, and reviewing taxi routes on the airport diagram.
8. Utilizing procedures to insure that clearance or instructions that are actually received are adhered to rather than the ones expected to be received.
9. Utilizing procedures to maintain/enhance situational awareness when conducting taxi operations in relation to other aircraft operations in the vicinity as well as to other vehicles moving on the airport.
10. Exhibiting procedures for briefing if a landing rollout to a taxiway exit will place the pilot in close proximity to another runway which can result in a runway incursion.
11. Conducting appropriate after landing/taxi procedures in the event the aircraft is on a taxiway that is between parallel runways.
12. Knowing specific procedures for operations at an airport ATC communications and runway entry/crossing authorizations.
13. Utilizing ATC communications and pilot actions before takeoff, before landing, and after landing at towered and non-towered airports.
14. Knowing procedures unique to night operations.
15. Knowing operations at non-towered airports.
16. Knowing the use of aircraft exterior lighting.
17. Knowing the hazards of Low visibility operations.

II. AREA OF OPERATION: PREFLIGHT PROCEDURES

F. TASK: BEFORE TAKEOFF CHECK (ASEL and ASES)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to the before takeoff check. This **shall include** the reasons for checking each item and how to detect malfunctions.
2. Positions the airplane properly considering other aircraft/vessels, wind and surface conditions.
3. Divides attention inside and outside the cockpit.
4. Ensures that engine temperature and pressure are suitable for runup and takeoff.
5. Accomplishes the before takeoff checklist and ensures the airplane is in safe operating condition.
6. Reviews takeoff performance airspeeds, takeoff distances, departure, and emergency procedures.
7. Avoids runway incursions and/or ensures no conflict with traffic prior to taxiing into takeoff position.

II. AREA OF OPERATION: PREFLIGHT PROCEDURES

TASK G: BEFORE TAKEOFF CHECK (ASEL and ASES)

References: FAA-H-8083-3, FAA-H-8083-23; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to the before takeoff check. This **shall include** the reasons for checking each item and how to detect malfunctions.
2. Positions the airplane properly considering other aircraft/vessels, wind, and surface conditions.
3. Divides attention inside and outside the cockpit.
4. Ensures that engine temperature(s) and pressure(s) are suitable for runup and takeoff.
5. Accomplishes the before takeoff checklist and ensures the airplane is in safe operating condition **as recommended by the manufacturer**.
6. Reviews takeoff performance, such as airspeeds, takeoff distances, departure, and emergency procedures.
7. Avoids runway incursions and ensures no conflict with traffic prior to taxiing into takeoff position.

III. AREA OF OPERATION: AIRPORT AND SEAPLANE BASE OPERATIONS

A. TASK: RADIO COMMUNICATIONS AND ATC LIGHT SIGNALS (ASEL and ASES)

REFERENCES: 14 CFR part 91; AC 61-23/FAA-H-8083-25; AIM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to radio communications and ATC light signals.
2. Selects appropriate frequencies.
3. Transmits using recommended phraseology.
4. Acknowledges radio communications and complies with instructions.

III. AREA OF OPERATION: AIRPORT AND SEAPLANE BASE OPERATIONS

TASK A: RADIO COMMUNICATIONS AND ATC LIGHT SIGNALS (ASEL and ASES)

References: 14 CFR part 91; FAA-H-8083-25; AIM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to radio communications and ATC light signals.
2. Selects appropriate frequencies.
3. Transmits using **AIM specified phraseology and procedures**.
4. Acknowledges radio communications and complies with instructions.

III. AREA OF OPERATION: AIRPORT AND SEAPLANE BASE OPERATIONS

B. TASK: TRAFFIC PATTERNS (ASEL and ASES)

REFERENCES: FAA-H-8083-3, AC 61-23/FAA-H-8083-25, AC 90-66; AIM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to traffic patterns. This **shall include** procedures at airports with and without operating control towers, prevention of runway incursions, collision avoidance, wake turbulence avoidance, and wind shear.

2. Complies with proper traffic pattern procedures.

3. Maintains proper spacing from other aircraft.

4. Corrects for wind drift to maintain the proper ground track.

5. Maintains orientation with the runway/landing area in use.

6. Maintains traffic pattern altitude, ±100 feet (30 meters), and the appropriate airspeed, ±10 knots.

III. AREA OF OPERATION: AIRPORT AND SEAPLANE BASE OPERATIONS

TASK B: TRAFFIC PATTERNS (ASEL and ASES)

References: FAA-H-8083-3, FAA-H-8083-25; AC 90-66; AIM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to traffic patterns. This **shall include** procedures at airports with and without operating control towers, prevention of runway incursions, collision avoidance, wake turbulence avoidance, and wind shear.
2. **Properly identifies and interprets airport/seaplane base runways, taxiway signs, markings, and lighting.**
3. Complies with proper traffic pattern procedures.
4. Maintains proper spacing from other aircraft.
5. Corrects for wind drift to maintain the proper ground track.
6. Maintains orientation with the runway/landing area in use.
7. Maintains traffic pattern altitude, ±100 feet, and the appropriate airspeed, ±10 knots.

III. AREA OF OPERATION: AIRPORT AND SEAPLANE BASE OPERATIONS

TASK C: AIRPORT/SEAPLANE BASE, RUNWAY, AND TAXIWAY SIGNS, MARKINGS, AND LIGHTING (ASEL and ASES)

References: **FAA-H-8083-23**, FAA-H-8083-25; AIM; **AFD; AC 91-73, AC 150-5340-18**.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to airport/seaplane base, runway, and taxiway operations with emphasis on runway incursion avoidance.
2. Properly identifies and interprets airport/seaplane base, runway, and taxiway signs, markings, and lighting, **with emphasis on runway incursion avoidance.**

III. AREA OF OPERATION: AIRPORT AND SEAPLANE BASE OPERATIONS

TASK C: AIRPORT/SEAPLANE BASE, RUNWAY, AND TAXIWAY SIGNS, MARKINGS, AND LIGHTING (ASEL and ASES)

References: **FAA-H-8083-23**, FAA-H-8083-25; AIM; **AFD; AC 91-73, AC 150-5340-18**.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to airport/seaplane base, runway, and taxiway operations with emphasis on runway incursion avoidance.
2. Properly identifies and interprets airport/seaplane base, runway, and taxiway signs, markings, and lighting, **with emphasis on runway incursion avoidance.**

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

A. TASK: NORMAL AND CROSSWIND TAKEOFF AND CLIMB (ASEL and ASES)

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

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a normal and crosswind takeoff, climb operations, and rejected takeoff procedures.
2. Positions the flight controls for the existing wind conditions.
3. Clears the area; taxies into the takeoff position and aligns the airplane on the runway center/takeoff path.
4. Retracts the water rudders, as appropriate, (ASES) and advances the throttle smoothly to takeoff power.
5. Establishes and maintains the most efficient planing/lift-off attitude and corrects for porpoising and skipping (ASES).
6. Lifts off at the recommended airspeed and accelerates to VY.
7. Establishes a pitch attitude that will maintain VY +10/-5 knots.
8. Retracts the landing gear, if appropriate, and flaps after a positive rate of climb is established.
9. Maintains takeoff power and VY +10/-5 knots to a safe maneuvering altitude.
10. Maintains directional control and proper wind-drift correction throughout the takeoff and climb.
11. Complies with noise abatement procedures.
12. Completes the appropriate checklist.

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

A. TASK: NORMAL AND CROSSWIND TAKEOFF AND CLIMB (ASEL and ASES)

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

REFERENCES: FAA-H-8083-3, **FAA-H-8083-23**; POH/AFM.

Objective. To determine that the applicant:

1. **Utilizes procedures before taxiing onto the runway or takeoff area to ensure runway incursion avoidance. Verify ATC clearance/no aircraft on final at non-towered airports before entering the runway, and ensure that the aircraft is on the correct takeoff runway.**
2. Exhibits **satisfactory** knowledge of the elements related to a normal and crosswind takeoff, climb operations, and rejected takeoff procedures.
3. **Ascertains wind direction with or without visible wind direction indicators.**
4. **Calculates/determines if crosswind component is above his or her ability or that of the aircraft's capability.**
5. Positions the flight controls for the existing wind conditions.
6. Clears the area; taxies into the takeoff position and aligns the airplane on the runway center/takeoff path.
7. Retracts the water rudders, as appropriate, (ASES) and advances the throttle smoothly to takeoff power.
8. Establishes and maintains the most efficient planing/lift-off attitude and corrects for porpoising and skipping (ASES).
9. **Rotates and** lifts off at the recommended airspeed and accelerates to VY.
10. Establishes a pitch attitude that will maintain VY ± 5 knots.
11. Retracts the landing gear, if appropriate, and flaps after a positive rate of climb is established.
12. Maintains takeoff power and VY +10/-5 knots to a safe maneuvering altitude.
13. Maintains directional control and proper wind-drift correction throughout the takeoff and climb.
14. Complies with **responsible environmental practices, including** noise abatement procedures.
15. Completes the appropriate checklist.

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

TASK B: NORMAL AND CROSSWIND APPROACH AND LANDING

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

References: FAA-H-8083-3; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits knowledge of the elements related to a normal and crosswind approach and landing.
2. Adequately surveys the intended landing area (ASES).
3. Considers the wind conditions, landing surface, obstructions, and selects a suitable touchdown point.
4. Establishes the recommended approach and landing configuration and airspeed, and adjusts pitch attitude and power as required.
5. Maintains a stabilized approach and recommended airspeed, or in its absence, not more than 1.3 VSO, +10/-5 knots, with wind gust factor applied.
6. Makes smooth, timely, and correct control application during the round out and touchdown.
7. Contacts the water at the proper pitch attitude (ASES).
8. Touches down smoothly at approximate stalling speed (ASEL).
9. Touches down at or, within 400 feet **(120 meters)** beyond a specified point with no drift, and with the airplane's longitudinal axis aligned with and over the runway center/landing path.
10. Maintains crosswind correction and directional control throughout the approach and landing sequence.
11. Completes the appropriate checklist.

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

TASK B: NORMAL AND CROSSWIND APPROACH AND LANDING

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

References: FAA-H-8083-3, **FAA-H-8083-23**; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to a normal and crosswind approach and landing with emphasis on proper use and coordination of flight controls.
2. Adequately surveys the intended landing area (ASES).
3. Considers the wind conditions, landing surface, obstructions, and selects a suitable touchdown point.
4. Establishes the recommended approach and landing configuration and airspeed, and adjusts pitch attitude and power as required.
5. Maintains a stabilized approach and recommended airspeed, or in its absence, not more than 1.3 VSO, +10/-5 knots, with wind gust factor applied.
6. Makes smooth, timely, and correct control application during the round out and touchdown.
7. Contacts the water at the proper pitch attitude (ASES).
8. Touches down smoothly at approximate stalling speed (ASEL).
9. Touches down **within the available runway or water landing area**, within 400 feet beyond a specified point with no drift, and with the airplane's longitudinal axis aligned with and over the runway center/landing path.
10. Maintains crosswind correction and directional control throughout the approach and landing sequence.
11. **Executes a timely go around decision when the approach cannot be made within the tolerances specified above.**
12. **Utilizes after landing runway incursion avoidance procedures.**
13. Completes the appropriate checklist.

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

C. TASK: SOFT-FIELD TAKEOFF AND CLIMB (ASEL)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a soft-field takeoff and climb.
2. Positions the flight controls for existing wind conditions and to maximize lift as quickly as possible.
3. Clears the area; taxies onto the takeoff surface at a speed consistent with safety without stopping while advancing the throttle smoothly to takeoff power.
4. Establishes and maintains a pitch attitude that will transfer the weight of the airplane from the wheels to the wings as rapidly as possible.
5. Lifts off at the lowest possible airspeed and remains in ground effect while accelerating to VX or VY, as appropriate.
6. Establishes a pitch attitude for VX or VY, as appropriate, and maintains selected airspeed +10/-5 knots, during the climb.
7. Retracts the landing gear, if appropriate, and flaps after clear of any obstacles or as recommended by the manufacturer.
8. Maintains takeoff power and VX or VY +10/-5 knots to a safe maneuvering altitude.
9. Maintains directional control and proper wind-drift correction throughout the takeoff and climb.
10. Completes the appropriate checklist

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

TASK C: SOFT-FIELD TAKEOFF AND CLIMB (ASEL)

References: FAA-H-8083-3; POH/AFM.

Objective: To determine that the applicant:

1. **Utilizes procedures before taxiing onto the runway or takeoff area to ensure runway incursion avoidance. Verify ATC clearance/no aircraft on final at non-towered airports before entering the runway, and ensure that the aircraft is on the correct takeoff runway.**
2. Exhibits **satisfactory** knowledge of the elements related to a soft-field takeoff and climb.
3. Positions the flight controls for existing wind conditions and to maximize lift as quickly as possible.
4. Clears the area; taxies onto the takeoff surface at a speed consistent with safety and aligns the airplane without stopping while advancing the throttle smoothly to takeoff power.
5. Establishes and maintains a pitch attitude that will transfer the weight of the airplane from the wheels to the wings as rapidly as possible.
6. **Rotates and** lifts off at the lowest possible airspeed and remains in ground effect while accelerating to VX or VY, as appropriate.
7. Establishes a pitch attitude for VX or VY, as appropriate, and maintains selected airspeed +10/-5 knots during the climb.
8. Retracts the landing gear, if appropriate, and flaps after clear of any obstacles or as recommended by the manufacturer.
9. Maintains takeoff power and VX or VY +10/-5 knots to a safe maneuvering altitude.
10. Maintains directional control and proper wind-drift correction throughout the takeoff and climb.
11. Completes the appropriate checklist.

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

D. TASK: SOFT-FIELD APPROACH AND LANDING (ASEL)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a soft-field approach and landing.
2. Considers the wind conditions, landing surface and obstructions, and selects the most suitable touchdown area.
3. Establishes the recommended approach and landing configuration, and airspeed; adjusts pitch attitude and power as required.
4. Maintains a stabilized approach and recommended airspeed, or in its absence not more than 1.3 VSO, +10/-5 knots, with wind gust factor applied.
5. Makes smooth, timely, and correct control application during the roundout and touchdown.
6. Touches down softly with no drift, and with the airplane's longitudinal axis aligned with the runway/landing path.
7. Maintains crosswind correction and directional control throughout the approach and landing sequence.
8. Maintains proper position of the flight controls and sufficient speed to taxi on the soft surface.
9. Completes the appropriate checklist.

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

TASK D: SOFT-FIELD APPROACH AND LANDING (ASEL)

References: FAA-H-8083-3; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to a soft-field approach and landing.
2. Considers the wind conditions, landing surface and obstructions, and selects the most suitable touchdown area.
3. Establishes the recommended approach and landing configuration, and airspeed; adjusts pitch attitude and power as required.
4. Maintains a stabilized approach and recommended airspeed, or in its absence not more than 1.3 VSO, +10/-5 knots, with wind gust factor applied.
5. Makes smooth, timely, and correct control application during the round out and touchdown.
6. Touches down softly with no drift, and with the airplane's longitudinal axis aligned with the runway/landing path.
7. Maintains crosswind correction and directional control throughout the approach and landing sequence.
8. Maintains proper position of the flight controls and sufficient speed to taxi on the soft surface.
9. **Utilizes after landing runway incursion avoidance procedures.**
10. Completes appropriate checklist.

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

E. TASK: SHORT-FIELD TAKEOFF (CONFINED AREA—ASES) AND MAXIMUM PERFORMANCE CLIMB (ASEL and ASES)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a short-field (confined area ASES) takeoff and maximum performance climb.
2. Positions the flight controls for the existing wind conditions; sets the flaps as recommended.
3. Clears the area; taxies into takeoff position utilizing maximum available takeoff area and aligns the airplane on the runway center/takeoff path.
4. Selects an appropriate take off path for the existing conditions (ASES).
5. Applies brakes (if appropriate), while advancing the throttle smoothly to takeoff power.
6. Establishes and maintains the most efficient planing/lift-off attitude and corrects for porpoising and skipping (ASES).
7. Lifts off at the recommended airspeed, and accelerates to the recommended obstacle clearance airspeed or VX.
8. Establishes a pitch attitude that will maintain the recommended obstacle clearance airspeed, or VX,+10/-5 knots, until the obstacle is cleared, or until the airplane is 50 feet (20 meters) above the surface.
9. After clearing the obstacle, establishes the pitch attitude for VY, accelerates to VY, and maintains VY, +10/-5 knots, during the climb.
10. Retracts the landing gear, if appropriate, and flaps after clear of any obstacles or as recommended by manufacturer.
11. Maintains takeoff power and VY +10/-5 to a safe maneuvering altitude.
12. Maintains directional control and proper wind-drift correction throughout the takeoff and climb.
14. Completes the appropriate checklist.

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

TASK E: SHORT-FIELD TAKEOFF (CONFINED AREA—ASES) AND MAXIMUM PERFORMANCE CLIMB (ASEL and ASES)

References: FAA-H-8083-3, FAA-H-8083-23; POH/AFM.

Objective: To determine that the applicant:

1. **Utilizes procedures before taxiing onto the runway or takeoff area to ensure runway incursion avoidance. Verify ATC clearance/no aircraft on final at non-towered airports before entering the runway, and ensure that the aircraft is on the correct takeoff runway.**
2. Exhibits **satisfactory** knowledge of the elements related to a short-field (confined area ASES) takeoff and maximum performance climb.
3. Positions the flight controls for the existing wind conditions; sets the flaps as recommended.
4. Clears the area; taxies into takeoff position utilizing maximum available takeoff area and aligns the airplane on the runway center/takeoff path.
5. Selects an appropriate takeoff path for the existing conditions (ASES).
6. Applies brakes (if appropriate), while advancing the throttle smoothly to takeoff power.
7. Establishes and maintains the most efficient planning/lift-off attitude and corrects for porpoising and skipping (ASES).
8. **Rotates and** lifts off at the recommended airspeed, and accelerates to the recommended obstacle clearance airspeed or VX.
9. Establishes a pitch attitude that will maintain the recommended obstacle clearance airspeed, or VX, +10/-5 knots, until the obstacle is cleared, or until the airplane is 50 feet above the surface.
10. After clearing the obstacle, establishes the pitch attitude forVY, accelerates to VY, and maintains VY, +10/-5 knots, during the climb.
11. Retracts the landing gear, if appropriate, and flaps after clear of any obstacles or as recommended by manufacturer.
12. Maintains takeoff power and VY +10/-5 to a safe maneuvering altitude.
13. Maintains directional control and proper wind-drift correction throughout the takeoff and climb.
14. Completes the appropriate checklist.

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

F. TASK: SHORT-FIELD APPROACH (CONFINED AREA—ASES) AND LANDING
(ASEL and ASES)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a short-field (confined area ASES) approach and landing.
2. Adequately surveys the intended landing area (ASES).
3. Considers the wind conditions, landing surface, obstructions, and selects the most suitable touchdown point.
4. Establishes the recommended approach and landing configuration and airspeed; adjusts pitch attitude and power as required.
5. Maintains a stabilized approach and recommended approach airspeed, or in its absence not more than 1.3 VSO, +10/-5 knots, with wind gust factor applied.
6. Makes smooth, timely, and correct control application during the roundout and touchdown.
7. Selects the proper landing path, contacts the water at the minimum safe airspeed with the proper pitch attitude for the surface conditions (ASES).
8. Touches down smoothly at minimum control airspeed (ASEL).
9. Touches down at or within 200 feet (60 meters) beyond a specified point, with no side drift, minimum float and with the airplane's longitudinal axis aligned with and over the runway center/landing path.
10. Maintains crosswind correction and directional control throughout the approach and landing sequence.
11. Applies brakes, (ASEL) or elevator control (ASEs), as necessary, to stop in the shortest distance consistent with safety.
12. Utilizes after landing runway incursion avoidance procedures.
13. Completes the appropriate checklist.

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

TASK F: SHORT-FIELD APPROACH (CONFINED AREA—ASES) AND LANDING
(ASEL and ASES)

References: FAA-H-8083-3, **FAA-H-8083-23**; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to a short-field (confined area ASES) approach and landing.
2. Adequately surveys the intended landing area (ASES).
3. Considers the wind conditions, landing surface, obstructions, and selects the most suitable touchdown point.
4. Establishes the recommended approach and landing configuration and airspeed; adjusts pitch attitude and power as required.
5. Maintains a stabilized approach and recommended approach airspeed, or in its absence not more than 1.3 VSO, +10/-5 knots, with wind gust factor applied.
6. Makes smooth, timely, and correct control application during the round out and touchdown.
7. Selects the proper landing path, contacts the water at the minimum safe airspeed with the proper pitch attitude for the surface conditions (ASES).
8. Touches down smoothly at minimum control airspeed (ASEL).
9. Touches down **within the available runway or water landing area**, at or within 200 feet beyond a specified point, with no side drift, minimum float, and with the airplane's longitudinal axis aligned with and over the runway center/landing path.
10. Maintains crosswind correction and directional control throughout the approach and landing sequence.
11. Applies brakes (ASEL), or elevator control (ASES), as necessary, to stop in the shortest distance consistent with safety.
12. Utilizes after landing runway incursion avoidance procedures.
13. Completes appropriate checklist.

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

K. TASK: FORWARD SLIP TO A LANDING (ASEL and ASES)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to forward slip to a landing.
2. Considers the wind conditions, landing surface and obstructions, and selects the most suitable touchdown point.
3. Establishes the slipping attitude at the point from which a landing can be made using the recommended approach and landing configuration and airspeed; adjusts pitch attitude and power as required.
4. Maintains a ground track aligned with the runway center/landing path and an airspeed, which results in minimum float during the roundout.
5. Makes smooth, timely, and correct control application during the recovery from the slip, the roundout, and the touchdown.
6. Touches down smoothly at the approximate stalling speed, at or within 400 feet (120 meters) beyond a specified point, with no side drift, and with the airplane's longitudinal axis aligned with and over the runway center/landing path.
7. Maintains crosswind correction and directional control throughout the approach and landing sequence.
8. Completes the appropriate checklist.

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

TASK K: FORWARD SLIP TO A LANDING (ASEL and ASES)

References: FAA-H-8083-3; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to forward slip to a landing.
2. Considers the wind conditions, landing surface and obstructions, and selects the most suitable touchdown point.
3. Establishes the slipping attitude at the point from which a landing can be made using the recommended approach and landing configuration and airspeed; adjusts pitch attitude and power as required.
4. Maintains a ground track aligned with the runway center/landing path and an airspeed, which results in minimum float during the round out.
5. Makes smooth, timely, and correct control application during the recovery from the slip, the round out, and the touchdown.
6. Touches down within 400 feet beyond a specified point with no drift, and with the airplane's longitudinal axis aligned with and over the runway center/landing path.
7. Maintains crosswind correction and directional control throughout the approach and landing sequence.
8. Completes the appropriate checklist.

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

L. TASK: GO-AROUND/REJECTED LANDING (ASEL and ASES)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a go-around/rejectedlanding.
2. Makes a timely decision to discontinue the approach to landing.
3. Applies takeoff power immediately and transitions to climb pitch attitude for VY, and maintains VY+10/-5 knots.
4. Retracts the flaps as appropriate.
5. Retracts the landing gear, if appropriate, after a positive rate of climb is established.
6. Maneuvers to the side of the runway/landing area to clear and avoid conflicting traffic.
7. Maintains takeoff power VY +10/-5 to a safe maneuvering altitude.
8. Maintains directional control and proper wind-drift correction throughout the climb.
9. Completes the appropriate checklist.

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

TASK L: GO-AROUND/REJECTED LANDING (ASEL and ASES)

References: FAA-H-8083-3, **FAA-H-8083-23**; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to a go around/rejected landing with emphasis on factors that contribute to landing conditions that may require a go around.
2. Makes a timely decision to discontinue the approach to landing.
3. Applies takeoff power immediately and transitions to climb pitch attitude for VX or VY as appropriate +10/-5 knots **and/or appropriate pitch attitude**.
4. Retracts the flaps, as appropriate.
5. Retracts the landing gear, if appropriate, after a positive rate of climb is established.
6. Maneuvers to the side of the runway/landing area to clear and avoid conflicting traffic.
7. Maintains takeoff power VY +10/-5 to a safe maneuvering altitude.
8. Maintains directional control and proper wind-drift correction throughout the climb.
9. Completes the appropriate checklist.

V. AREA OF OPERATION: PERFORMANCE MANEUVER

TASK: STEEP TURNS (ASEL and ASES)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to steep turns.
2. Establishes the manufacturer's recommended airspeed or if one is not stated, a safe airspeed not to exceed VA.
3. Rolls into a coordinated 360° turn; maintains a 45° bank.
4. Performs the task in the opposite direction, as specified by the examiner.
5. Divides attention between airplane control and orientation.
6. Maintains the entry altitude, ±100 feet (30 meters), airspeed, ±10 knots, bank, ±5°; and rolls out on the entry heading, ±10°.

V. AREA OF OPERATION: PERFORMANCE MANEUVER

TASK A: STEEP TURNS (ASEL and ASES)

References: FAA-H-8083-3; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to steep turns.
2. Establishes the manufacturer's recommended airspeed or if one is not stated, a safe airspeed not to exceed VA.
3. Rolls into a coordinated 360° turn; maintains a 45° bank.
4. Performs the task in the opposite direction, as specified by the examiner.
5. Divides attention between airplane control and orientation.
6. Maintains the entry altitude, ±100 feet, airspeed, ±10 knots, bank, ±5°; and rolls out on the entry heading, ±10°.

VI. AREA OF OPERATION: GROUND REFERENCE MANEUVERS

NOTE: The examiner shall select at least one TASK.

A. TASK: RECTANGULAR COURSE (ASEL and ASES)

REFERENCE: FAA-H-8083-3.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a rectangular course.
2. Selects a suitable reference area.
3. Plans the maneuver so as to enter a left or right pattern, 600 to 1,000 feet AGL (180 to 300 meters) at an appropriate distance from the selected reference area, 45° to the downwind leg.
4. Applies adequate wind-drift correction during straight-and-turning flight to maintain a constant ground track around the rectangular reference area.
5. Divides attention between airplane control and the ground track while maintaining coordinated flight.
6. Maintains altitude, ±100 feet (30 meters); maintains airspeed, ±10 knots.

VI. AREA OF OPERATION: GROUND REFERENCE MANEUVERS

NOTE: The examiner shall select at least one TASK.

A. TASK: RECTANGULAR COURSE (ASEL and ASES)

REFERENCE: FAA-H-8083-3.

Objective. To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to a rectangular course.
2. Selects a suitable reference area.
3. Plans the maneuver so as to enter a left or right pattern, 600 to 1,000 feet AGL at an appropriate distance from the selected reference area, 45° to the downwind leg.
4. Applies adequate wind-drift correction during straight-and-turning flight to maintain a constant ground track around the rectangular reference area.
5. Divides attention between airplane control and the ground track while maintaining coordinated flight.
6. Maintains altitude, ±100 feet; maintains airspeed, ±10 knots.

VI. AREA OF OPERATION: GROUND REFERENCE MANEUVERS

B. TASK: S-TURNS (ASEL and ASES)

REFERENCE: FAA-H-8083-3.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to S-turns.
2. Selects a suitable ground reference line.
3. Plans the maneuver so as to enter at 600 to 1,000 feet (180 to 300 meters) AGL, perpendicular to the selected reference line.
4. Applies adequate wind-drift correction to track a constant radius turn on each side of the selected reference line.
5. Reverses the direction of turn directly over the selected reference line.
6. Divides attention between airplane control and the ground track while maintaining coordinated flight.
7. Maintains altitude, ±100 feet (30 meters); maintains airspeed, ±10 knots.

VI. AREA OF OPERATION: GROUND REFERENCE MANEUVERS

TASK B: S-TURNS (ASEL and ASES)

Reference: FAA-H-8083-3.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to S-turns.
2. Selects a suitable ground reference line.
3. Plans the maneuver so as to enter at 600 to 1,000 feet AGL, perpendicular to the selected reference line.
4. Applies adequate wind-drift correction to track a constant radius turn on each side of the selected reference line.
5. Reverses the direction of turn directly over the selected reference line.
6. Divides attention between airplane control and the ground track while maintaining coordinated flight.
7. Maintains altitude, ±100 feet; maintains airspeed, ±10 knots.

VI. AREA OF OPERATION: GROUND REFERENCE MANEUVERS

C. TASK: TURNS AROUND A POINT (ASEL and ASES)

REFERENCE: FAA-H-8083-3.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to turns around a point.
2. Selects a suitable ground reference point.
3. Plans the maneuver so as to enter left or right at 600 to 1,000 feet (180 to 300 meters) AGL, at an appropriate distance from the reference point.
4. Applies adequate wind-drift correction to track a constant radius turn around the selected reference point.
5. Divides attention between airplane control and the ground track while maintaining coordinated flight.
6. Maintains altitude, ±100 feet (30 meters); maintains airspeed, ±10 knots.

VI. AREA OF OPERATION: GROUND REFERENCE MANEUVERS

TASK C: TURNS AROUND A POINT (ASEL and ASES)

References: FAA-H-8083-3; 14 CFR part 61.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to turns around a point.
2. Selects a suitable ground reference point.
3. Plans the maneuver so as to enter left or right at 600 to 1,000 feet AGL, at an appropriate distance from the reference point.
4. Applies adequate wind-drift correction to track a constant radius turn around the selected reference point.
5. Divides attention between airplane control and the ground track while maintaining coordinated flight.
6. Maintains altitude, ±100 feet; maintains airspeed, ±10 knots.

VII. AREA OF OPERATION: NAVIGATION

A. TASK: PILOTAGE AND DEAD RECKONING (ASEL and ASES)

REFERENCES: AC 61-23/FAA-H-8083-25.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to pilotage and dead reckoning.
2. Follows the preplanned course by reference to landmarks.
3. Identifies landmarks by relating surface features to chart symbols.
4. Navigates by means of precomputed headings, groundspeeds, and elapsed time.
5. Corrects for and records the differences between preflight groundspeed and heading calculations and those determined en route.
6. Verifies the airplane's position within three (3) nautical miles of the flight-planned route.
7. Arrives at the en route checkpoints within five (5) minutes of the initial or revised ETA and provides a destination estimate.
8. Maintains the appropriate altitude, ±200 feet (60 meters) and headings, ±15°.

VII. AREA OF OPERATION: NAVIGATION

Task A: Pilotage and Dead Reckoning (ASEL and ASES)

References: FAA-H-8083-25; 14 CFR part 61; **Navigation Chart**.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to pilotage and dead reckoning.
2. Follows the preplanned course by reference to landmarks.
3. Identifies landmarks by relating surface features to chart symbols.
4. Navigates by means of precomputed headings, groundspeeds, and elapsed time.
5. Demonstrates use of magnetic compass in navigation, to include turns to new headings.
6. Corrects for and records the differences between preflight groundspeed, fuel consumption, and heading calculations and those determined en route.
7. Verifies the airplane's position within 3 nautical miles of the flight-planned route.
8. Arrives at the en route checkpoints within 5 minutes of the initial or revised ETA and provides a destination estimate.
9. Maintains the appropriate altitude, ±200 feet and headings, ±15

VII. AREA OF OPERATION: NAVIGATION

B. TASK: NAVIGATION SYSTEMS AND RADAR SERVICES (ASEL and ASES)

REFERENCES: FAA-H-8083-3, AC 61-23/FAA-H-8083-25; Navigation Equipment Operation Manuals, AIM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to navigation systems and radar services.
2. Demonstrates the ability to use an airborne electronic navigation system.
3. Locates the airplane's position using the navigation system.
4. Intercepts and tracks a given course, radial or bearing, as appropriate.
5. Recognizes and describes the indication of station passage, if appropriate.
6. Recognizes signal loss and takes appropriate action.
7. Uses proper communication procedures when utilizing radar services.
8. Maintains the appropriate altitude, ±200 feet (60 meters) and headings ±15°.

VII. AREA OF OPERATION: NAVIGATION

TASK B: NAVIGATION SYSTEMS AND RADAR SERVICES (ASEL and ASES)

References: FAA-H-8083-3, FAA-H-8083-6, FAA-H-8083-25; Navigation Equipment Operation Manuals; AIM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to navigation systems and radar services.
2. Demonstrates the ability to use an airborne electronic navigation system.
3. Locates the airplane's position using the navigation system.
4. Intercepts and tracks a given course, radial, or bearing, as appropriate.
5. Recognizes and describes the indication of station passage, if appropriate.
6. Recognizes signal loss and takes appropriate action.
7. Uses proper communication procedures when utilizing radar services.
8. Maintains the appropriate altitude, ±200 feet and headings ±15°.

VII. AREA OF OPERATION: NAVIGATION

C. TASK: DIVERSION (ASEL and ASES)

REFERENCES: AC 61-23/FAA-H-8083-25; AIM.

Objective. To determine that the applicant:

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

VII. AREA OF OPERATION: NAVIGATION

TASK C: DIVERSION (ASEL and ASES)

References: FAA-H-8083-25; AIM; **Navigation Chart**.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to diversion.
2. Selects an appropriate alternate airport and route.
3. Makes an accurate estimate of heading, groundspeed, arrival time, and fuel consumption to the alternate airport.
4. Maintains the appropriate altitude, ±200 feet and heading, ±15°.

VII. AREA OF OPERATION: NAVIGATION

D. TASK: LOST PROCEDURES (ASEL and ASES)

REFERENCES: AC 61-23/FAA-H-8083-25; AIM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to lost procedures.
2. Selects an appropriate course of action.
3. Maintains an appropriate heading and climbs, if necessary.
4. Identifies prominent landmarks.
5. Uses navigation systems/facilities and/or contacts an ATC facility for assistance, as appropriate.

VII. AREA OF OPERATION: NAVIGATION

Task D: Lost Procedures (ASEL and ASES)

References: FAA-H-8083-25; AIM; **Navigation Chart**.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to lost procedures.
2. Selects an appropriate course of action.
3. Maintains an appropriate heading and climbs, if necessary.
4. Identifies prominent landmarks.
5. Uses navigation systems/facilities and/or contacts an ATC facility for assistance, as appropriate.

VIII. AREA OF OPERATION: SLOW FLIGHT AND STALLS

A. TASK: MANEUVERING DURING SLOW FLIGHT (ASEL and ASES)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to maneuvering during slow flight.
2. Selects an entry altitude that will allow the task to be completed no lower than 1,500 feet (460 meters) AGL.
3. Establishes and maintains an airspeed at which any further increase in angle of attack, increase in load factor, or reduction in power, would result in an immediate stall.
4. Accomplishes coordinated straight-and-level flight, turns, climbs, and descents with landing gear and flap configurations specified by the examiner.
5. Divides attention between airplane control and orientation.
6. Maintains the specified altitude, ±100 feet (30 meters); specified heading, ±10°; airspeed, +10/–0 knots; and specified angle of bank, ±10°.

VIII. AREA OF OPERATION: SLOW FLIGHT AND STALLS

NOTE: *In accordance with FAA policy, all stalls for the Private rating will be taken to the full stall condition, prior to initiating the recovery.*

TASK A: MANEUVERING DURING SLOW FLIGHT (ASEL and ASES)

References: FAA-H-8083-3; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to maneuvering during slow flight.
2. Selects an entry altitude that will allow the task to be completed no lower than 1,500 feet AGL.
3. Establishes and maintains an airspeed at which any further increase in angle of attack, increase in load factor, or reduction in power, would result in an immediate stall.
4. Accomplishes coordinated straight-and-level flight, turns, climbs, and descents with landing gear and flap configurations specified by the examiner.
5. Divides attention between airplane control and orientation.
6. Maintains the specified altitude, ±100 feet; specified heading, ±10°; airspeed, +10/−0 knots; and specified angle of bank, ±10°.

VIII. AREA OF OPERATION: SLOW FLIGHT AND STALLS

B. TASK: POWER-OFF STALLS (ASEL and ASES)

REFERENCES: FAA-H-8083-3, AC 61-67; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to power-off stalls.
2. Selects an entry altitude that allows the task to be completed no lower than 1,500 feet (460 meters) AGL.
3. Establishes a stabilized descent in the approach or landing configuration, as specified by the examiner.
4. Transitions smoothly from the approach or landing attitude to a pitch attitude that will induce a stall.
5. Maintains a specified heading, ±10°, in straight flight; maintains a specified angle of bank not to exceed 20°, ±10°, in turning flight, while inducing the stall.
6. Recognizes and recovers promptly after the stall occurs by simultaneously reducing the angle of attack, increasing power to maximum allowable, and leveling the wings to return to a straight-and-level flight attitude with a minimum loss of altitude appropriate for the airplane.
7. Retracts the flaps to the recommended setting; retracts the landing gear, if retractable, after a positive rate of climb is established.
8. Accelerates to VX or VY speed before the final flap retraction; returns to the altitude, heading, and airspeed specified by the examiner.

VIII. AREA OF OPERATION: SLOW FLIGHT AND STALLS

TASK B: POWER-OFF STALLS (ASEL and ASES)

References: FAA-H-8083-3; AC 61-67; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to power-off stalls.
2. Selects an entry altitude that allows the task to be completed no lower than 1,500 feet AGL.
3. Establishes a stabilized descent in the approach or landing configuration, as specified by the examiner.
4. Transitions smoothly from the approach or landing attitude to a pitch attitude that will induce a stall.
5. Maintains a specified heading, ±10°, if in straight flight; maintains a specified angle of bank not to exceed 20°, ±10°; if in turning flight, while inducing the stall.
6. Recognizes and recovers promptly after a fully developed stall occurs by simultaneously reducing the angle of attack, increasing power to maximum allowable and leveling the wings to return to a straight-and-level flight attitude with a minimum loss of altitude appropriate for the airplane.
7. Retracts the flaps to the recommended setting; retracts the landing gear, if retractable, after a positive rate of climb is established.
8. Accelerates to VX or VY speed before the final flap retraction; returns to the altitude, heading, and airspeed specified by the examiner.

VIII. AREA OF OPERATION: SLOW FLIGHT AND STALLS

C. TASK: POWER-ON STALLS (ASEL and ASES)

NOTE: In some high performance airplanes, the power setting may have to be reduced below the practical test standards guideline power setting to prevent excessively high pitch attitudes (greater than 30° nose up).

REFERENCES: FAA-H-8083-3, AC 61-67; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to power-on stalls.
2. Selects an entry altitude that allows the task to be completed no lower than 1,500 feet (460 meters) AGL.
3. Establishes the takeoff or departure configuration. Sets power to no less than 65 percent available power.
4. Transitions smoothly from the takeoff or departure attitude to the pitch attitude that will induce a stall.
5. Maintains a specified heading, ±10°, in straight flight; maintains a specified angle of bank not to exceed 20°, ±10°, in turning flight, while inducing the stall.
6. Recognizes and recovers promptly after the stall occurs by simultaneously reducing the angle of attack, increasing power as appropriate, and leveling the wings to return to a straight-and-level flight attitude with a minimum loss of altitude appropriate for the airplane.
7. Retracts the flaps to the recommended setting; retracts the landing gear if retractable, after a positive rate of climb is established.
8. Accelerates to VX or VY speed before the final flap retraction; returns to the altitude, heading, and airspeed specified by the examiner.

VIII. AREA OF OPERATION: SLOW FLIGHT AND STALLS

TASK C: POWER-ON STALLS (ASEL and ASES)

NOTE: In some high performance airplanes, the power setting may have to be reduced below the practical test standards guideline power setting to prevent excessively high pitch attitudes (greater than 30° nose up).

References: FAA-H-8083-3; AC 61-67; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to power-on stalls.
2. Selects an entry altitude that allows the task to be completed no lower than 1,500 feet AGL.
3. Establishes the takeoff or departure configuration as specified by the examiner. Sets power to no less than 65 percent available power.
4. Transitions smoothly from the takeoff or departure attitude to the pitch attitude that will induce a stall.
5. Maintains a specified heading, ±10°, if in straight flight; maintains a specified angle of bank not to exceed 20°, ±10°, if in turning flight, while inducing the stall.
6. Recognizes and recovers promptly after a fully developed stall occurs by simultaneously reducing the angle of attack, increasing power as appropriate, and leveling the wings to return to a straight-and-level flight attitude with a minimum loss of altitude appropriate for the airplane.
7. Retracts the flaps to the recommended setting; retracts the landing gear if retractable, after a positive rate of climb is established.
8. Accelerates to VX or VY speed before the final flap retraction; returns to the altitude, heading, and airspeed specified by the examiner.

VIII. AREA OF OPERATION: SLOW FLIGHT AND STALLS

D. TASK: SPIN AWARENESS (ASEL and ASES)

REFERENCES: FAA-H-8083-3, AC 61-67; POH/AFM.

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

1. Aerodynamic factors related to spins.

2. Flight situations where unintentional spins may occur.

3. Procedures for recovery from unintentional spins

VIII. AREA OF OPERATION: SLOW FLIGHT AND STALLS

TASK D: SPIN AWARENESS (ASEL and ASES)

References: FAA-H-8083-3; AC 61-67; POH/AFM.

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

1. Aerodynamic factors related to spins.

2. Flight situations where unintentional spins may occur.

3. Procedures for recovery from unintentional spins.

IX. AREA OF OPERATION: BASIC INSTRUMENT MANEUVERS

NOTE: The examiner shall select task E and at least two other TASKs.

A. TASK: STRAIGHT-AND-LEVEL FLIGHT (ASEL and ASES)

REFERENCES: FAA-H-8083-3, FAA-H-8083-15.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to attitude instrument flying during straight-and-level flight.
2. Maintains straight-and-level flight solely by reference to instruments using proper instrument cross-check and interpretation, and coordinated control application.
3. Maintains altitude, ±200 feet (60 meters); heading, ±20°; and airspeed, ±10 knots.

IX. AREA OF OPERATION: BASIC INSTRUMENT MANEUVERS

TASK A: STRAIGHT-AND-LEVEL FLIGHT (ASEL and ASES)

References: FAA-H-8083-3, FAA-H-8083-15.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to attitude instrument flying during straight-and-level flight.
2. Maintains straight-and-level flight solely by reference to instruments using proper instrument cross-check and interpretation, and coordinated control application.
3. Maintains altitude, ±200 feet; heading, ±20°; and airspeed, ±10 knots.

IX. AREA OF OPERATION: BASIC INSTRUMENT MANEUVERS

B. TASK: CONSTANT AIRSPEED CLIMBS (ASEL and ASES)

REFERENCES: FAA-H-8083-3, FAA-H-8083-15.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to attitude instrument flying during constant airspeed climbs.
2. Establishes the climb configuration specified by the examiner.
3. Transitions to the climb pitch attitude and power setting on an assigned heading using proper instrument cross-check and interpretation, and coordinated control application.
4. Demonstrates climbs solely by reference to instruments at a constant airspeed to specific altitudes in straight flight and turns.
5. Levels off at the assigned altitude and maintains that altitude, ±200 feet (60 meters); maintains heading, ±20°; maintains airspeed, ±10 knots.

IX. AREA OF OPERATION: BASIC INSTRUMENT MANEUVERS

TASK B: CONSTANT AIRSPEED CLIMBS (ASEL and ASES)

References: FAA-H-8083-3, FAA-H-8083-15.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to attitude instrument flying during constant airspeed climbs.
2. Establishes the climb configuration specified by the examiner.
3. Transitions to the climb pitch attitude and power setting on an assigned heading using proper instrument cross-check and interpretation, and coordinated control application.
4. Demonstrates climbs solely by reference to instruments at a constant airspeed to specific altitudes in straight flight and turns.
5. Levels off at the assigned altitude and maintains that altitude, ±200 feet; maintains heading, ±20°; maintains airspeed, ±10 knots.

IX. AREA OF OPERATION: BASIC INSTRUMENT MANEUVERS

C. TASK: CONSTANT AIRSPEED DESCENTS (ASEL and ASES)

REFERENCES: FAA-H-8083-3, FAA-H-8083-15.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to attitude instrument flying during constant airspeed descents.
2. Establishes the descent configuration specified by the examiner.
3. Transitions to the descent pitch attitude and power setting on an assigned heading using proper instrument cross-check and interpretation, and coordinated control application.
4. Demonstrates descents solely by reference to instruments at a constant airspeed to specific altitudes in straight flight and turns.
5. Levels off at the assigned altitude and maintains that altitude, ±200 feet (60 meters); maintains heading, ±20°; maintains airspeed, ±10 knots.

IX. AREA OF OPERATION: BASIC INSTRUMENT MANEUVERS

TASK C: CONSTANT AIRSPEED DESCENTS (ASEL and ASES)

References: FAA-H-8083-3, FAA-H-8083-15.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to attitude instrument flying during constant airspeed descents.
2. Establishes the descent configuration specified by the examiner.
3. Transitions to the descent pitch attitude and power setting on an assigned heading using proper instrument crosscheck and interpretation, and coordinated control application.
4. Demonstrates descents solely by reference to instruments at a constant airspeed to specific altitudes in straight flight and turns.
5. Levels off at the assigned altitude and maintains that altitude, ±200 feet; maintains heading, ±20°; maintains airspeed, ±10 knots.

IX. AREA OF OPERATION: BASIC INSTRUMENT MANEUVERS

D. TASK: TURNS TO HEADINGS (ASEL and ASES)

REFERENCES: FAA-H-8083-3, FAA-H-8083-15.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to attitude instrument flying during turns to headings.
2. Transitions to the level-turn attitude using proper instrument crosscheck and interpretation, and coordinated control application.
3. Demonstrates turns to headings solely by reference to instruments; maintains altitude, ±200 feet (60 meters); maintains a standard rate turn and rolls out on the assigned heading, ± 10°; maintains airspeed, ±10 knots.

IX. AREA OF OPERATION: BASIC INSTRUMENT MANEUVERS

TASK D: TURNS TO HEADINGS (ASEL and ASES)

References: FAA-H-8083-3, FAA-H-8083-15.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to attitude instrument flying during turns to headings.
2. Transitions to the level-turn attitude using proper instrument cross-check and interpretation, and coordinated control application.
3. Demonstrates turns to headings solely by reference to instruments; maintains altitude, ±200 feet; maintains a standard rate turn and rolls out on the assigned heading, ± 10°; maintains airspeed, ±10 knots.

IX. AREA OF OPERATION: BASIC INSTRUMENT MANEUVERS

E. TASK: RECOVERY FROM UNUSUAL FLIGHT ATTITUDES (ASEL and ASES)

REFERENCES: FAA-H-8083-3, FAA-H-8083-15.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to attitude instrument flying during unusual attitudes.
2. Recognizes unusual flight attitudes solely by reference to instruments; recovers promptly to a stabilized level flight attitude using proper instrument cross-check and interpretation and smooth, coordinated control application in the correct sequence.

IX. AREA OF OPERATION: BASIC INSTRUMENT MANEUVERS

TASK E: RECOVERY FROM UNUSUAL FLIGHT ATTITUDES (ASEL and ASES)

References: FAA-H-8083-3, FAA-H-8083-15.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to attitude instrument flying during unusual attitudes.

2. Recognizes unusual flight attitudes solely by reference to instruments; recovers promptly to a stabilized level flight attitude using proper instrument cross-check and interpretation and smooth, coordinated control application in the correct sequence.

IX. AREA OF OPERATION: BASIC INSTRUMENT MANEUVERS

F. TASK: RADIO COMMUNICATIONS, NAVIGATION SYSTEMS/FACILITIES, AND RADAR SERVICES (ASEL and ASES)

REFERENCES: FAA-H-8083-3, FAA-H-8083-15, AC 61-23/FAA-H-8083-25.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to radio communications, navigation systems/facilities, and radar services available for use during flight solely by reference to instruments.

2. Selects the proper frequency and identifies the appropriate facility.

3. Follows verbal instructions and/or navigation systems/facilities for guidance.

4. Determines the minimum safe altitude.

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

IX. AREA OF OPERATION: BASIC INSTRUMENT MANEUVERS

TASK F: RADIO COMMUNICATIONS, NAVIGATION SYSTEMS/FACILITIES, AND RADAR SERVICES (ASEL and ASES)

References: FAA-H-8083-3, FAA-H-8083-15, FAA-H-8083-25.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to radio communications, navigation systems/facilities, and radar services available for use during flight solely by reference to instruments.

2. Selects the proper frequency and identifies the appropriate facility.

3. Follows verbal instructions and/or navigation systems/facilities for guidance.

4. Determines the minimum safe altitude.

5. Maintains altitude, ±200 feet; maintains heading, ±20°; maintains airspeed, ±10 knots.

SUPERSEDED PRIVATE PTS

Emergency Descent is a new task and was not in this PTS that was recently superseded

X. AREA OF OPERATION: EMERGENCY OPERATIONS

TASK A: EMERGENCY DESCENT (ASEL and ASES)

References: FAA-H-8083-3; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to an emergency descent.
2. Recognizes situations, such as depressurization, cockpit smoke, and/or fire that require an emergency descent.
3. Establishes the appropriate airspeed and configuration for the emergency descent.
4. Exhibits orientation, division of attention, and proper planning.
5. Maintains positive load factors during the descent.
6. Completes appropriate checklists.

X. AREA OF OPERATION: EMERGENCY OPERATIONS

A. TASK: EMERGENCY APPROACH AND LANDING (SIMULATED) (ASEL and ASES)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to emergency approach and landing procedures.
2. Analyzes the situation and selects an appropriate course of action.
3. Establishes and maintains the recommended best-glide airspeed, ±10 knots.
4. Selects a suitable landing area.
5. Plans and follows a flight pattern to the selected landing area considering altitude, wind, terrain, and obstructions.
6. Prepares for landing, or go-around, as specified by the examiner.
7. Follows the appropriate checklist.

X. AREA OF OPERATION: EMERGENCY OPERATIONS

TASK B: EMERGENCY APPROACH AND LANDING (SIMULATED) (ASEL and ASES)

References: FAA-H-8083-3, **FAA-H-8083-23**; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to emergency approach and landing procedures.
2. Analyzes the situation and selects an appropriate course of action.
3. Establishes and maintains the recommended best-glide airspeed, ±10 knots.
4. Selects a suitable landing area.
5. Plans and follows a flight pattern to the selected landing area considering altitude, wind, terrain, and obstructions.
6. Prepares for landing, or go-around, as specified by the examiner.
7. Follows the appropriate checklist.

X. AREA OF OPERATION: EMERGENCY OPERATIONS

B. TASK: SYSTEMS AND EQUIPMENT MALFUNCTIONS (ASEL and ASES)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to system and equipment malfunctions appropriate to the airplane provided for the practical test.
2. Analyzes the situation and takes appropriate action for simulated emergencies appropriate to the airplane provided for the practical test for at least three (3) of the following—
   - **a.** partial or complete power loss.
   - **b.** engine roughness or overheat.
   - **c.** carburetor or induction icing.
   - **d.** loss of oil pressure.
   - **e.** fuel starvation.
   - **f.** electrical malfunction.
   - **g.** vacuum/pressure, and associated flight instruments malfunction.
   - **h.** pitot/static.
   - **i.** landing gear or flap malfunction.
   - **j.** inoperative trim.
   - **k.** inadvertent door or window opening.
   - **l.** structural icing.
   - **m.** smoke/fire/engine compartment fire.
   - **n.** any other emergency appropriate to the airplane.
3. Follows the appropriate checklist or procedure.

X. AREA OF OPERATION: EMERGENCY OPERATIONS

TASK C: SYSTEMS AND EQUIPMENT MALFUNCTIONS (ASEL and ASES)

References: FAA-H-8083-3; POH/AFM.

Objective: To determine that the applicant

1. Exhibits **satisfactory** knowledge of the elements related to system and equipment malfunctions appropriate to the airplane provided for the practical test.
2. Analyzes the situation and takes appropriate action for simulated emergencies appropriate to the airplane provided for the practical test for at least three of the following—
   - **a.** partial or complete power loss.
   - **b.** engine roughness or overheat.
   - **c.** carburetor or induction icing.
   - **d.** loss of oil pressure.
   - **e.** fuel starvation.
   - **f.** electrical malfunction.
   - **g.** vacuum/pressure, and associated flight instruments malfunction.
   - **h.** pitot/static system malfunction.
   - **i.** landing gear or flap malfunction.
   - **j.** inoperative trim.
   - **k.** inadvertent door or window opening.
   - **l.** structural icing.
   - **m.** smoke/fire/engine compartment fire.
   - **n.** any other emergency appropriate to the airplane.
3. Follows the appropriate checklist or procedure.

X. AREA OF OPERATION: EMERGENCY OPERATIONS

C. TASK: EMERGENCY EQUIPMENT AND SURVIVAL GEAR (ASEL and ASES)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

Exhibits knowledge of the elements related to emergency equipment and survival gear appropriate to the airplane and environment encountered during flight. Identifies appropriate equipment that should be aboard the airplane.

X. AREA OF OPERATION: EMERGENCY OPERATIONS

TASK D: EMERGENCY EQUIPMENT AND SURVIVAL GEAR (ASEL and ASES)

References: FAA-H-8083-3; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to emergency equipment and survival gear appropriate to the airplane and environment encountered during flight.
2. Identifies appropriate equipment that should be onboard the airplane.

XI. AREA OF OPERATION: NIGHT OPERATION

TASK: NIGHT PREPARATION (ASEL and ASES)

REFERENCES: FAA-H-8083-3, AC 61-23/FAA-H-8083-25, AC 67-2; AIM, POH/AFM.

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

1. Physiological aspects of night flying as it relates to vision.
2. Lighting systems identifying airports, runways, taxiways and obstructions, and pilot controlled lighting.
3. Airplane lighting systems.
4. Personal equipment essential for night flight.
5. Night orientation, navigation, and chart reading techniques.
6. Safety precautions and emergencies unique to night flying.

XI. AREA OF OPERATION: NIGHT OPERATION

TASK A: NIGHT PREPARATION (ASEL and ASES)

References: FAA-H-8083-3, FAA-H-8083-25; AIM; POH/AFM.

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

1. Physiological aspects of night flying as it relates to vision.
2. Lighting systems identifying airports, runways, taxiways and obstructions, and pilot controlled lighting.
3. Airplane lighting systems.
4. Personal equipment essential for night flight.
5. Night orientation, navigation, and chart reading techniques.
6. Safety precautions and emergencies unique to night flying.
7. **Somatogravic illusion and black hole approach illusion.**

XII. AREA OF OPERATION: POSTFLIGHT PROCEDURES

NOTE: The examiner shall select TASK A and for ASES applicants at least one other TASK.

A. TASK: AFTER LANDING, PARKING, AND SECURING (ASEL and ASES)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to after landing, parking and securing procedures.
2. Maintains directional control after touchdown while decelerating to an appropriate speed.
3. Observes runway hold lines and other surface control markings and lighting.
4. Parks in an appropriate area, considering the safety of nearby persons and property.
5. Follows the appropriate procedure for engine shutdown.
6. Completes the appropriate checklist.
7. Conducts an appropriate postflight inspection and secures the aircraft.

XII. AREA OF OPERATION: POSTFLIGHT PROCEDURES

NOTE: The examiner shall select Task A and for ASES applicants at least one other Task.

TASK A: AFTER LANDING, PARKING, AND SECURING (ASEL and ASES)

References: FAA-H-8083-3, **FAA-H-8083-23**; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to after landing, parking, and securing procedures.
2. Maintains directional control after touchdown while decelerating to an appropriate speed.
3. Observes runway hold lines and other surface control markings and lighting.
4. Parks in an appropriate area, considering the safety of nearby persons and property.
5. Follows the appropriate procedure for engine shutdown.
6. Completes the appropriate checklist.
7. Conducts an appropriate postflight inspection and secures the aircraft.

PRIVATE PTS

NEW TASKS

Runway Incursion Avoidance

Emergency Descent

COMPARISON OF SUPERSEDED COMMERCIAL PTS AND THE CURRENT COMMERCIAL PTS THAT BECAME EFFECTIVE JUNE 1, 2012

I. AREA OF OPERATION: PREFLIGHT PREPARATION

NOTE: The examiner shall develop a scenario based on real time weather to evaluate TASKs C and D.

A. TASK: CERTIFICATES AND DOCUMENTS (ASEL and ASES)

REFERENCES: 14 CFR parts 43, 61, 91; FAA-H-8083-3; AC 61-23/FAA-H-8083-25; POH/AFM.

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

1. Explaining—

- **a.** commercial pilot certificate privileges limitations and recent flight experience requirements.
- **b.** medical certificate class and duration.
- **c.** pilot logbook or flight records.

2. Locating and explaining—

- **a.** airworthiness and registration certificates.
- **b.** operating limitations, placards, instrument markings, and POH/AFM.
- **c.** weight and balance data and equipment list.

I. AREA OF OPERATION: PREFLIGHT PREPARATION

NOTE: *The examiner shall develop a scenario based on real time weather to evaluate Tasks C and D.*

References: 14 CFR parts 39, 43, 61, 91; FAA-H-8083-3, FAA-H-8083-25; POH/AFM.

TASK A: CERTIFICATES AND DOCUMENTS (ASEL and ASES)

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

1. Explaining—
   - **a.** commercial pilot certificate privileges, limitations, and recent flight experience requirements.
   - **b.** medical certificate class and duration.
   - **c.** pilot logbook or flight records.
2. Locating and explaining—
   - **a.** airworthiness and registration certificates.
   - **b.** operating limitations, placards, instrument markings, and POH/AFM.
   - **c.** weight and balance data and equipment list.

I. AREA OF OPERATION: PREFLIGHT PREPARATION

B. TASK: AIRWORTHINESS REQUIREMENTS (ASEL and ASES)

REFERENCES: 14 CFR part 91; AC 61-23/FAA-H-8083-25.

Objective. To determine that the applicant exhibits knowledge of the elements related to airworthiness requirements by:

1. Explaining—

a. required instruments and equipment for day/night VFR.
b. procedures and limitations for determining airworthiness of the airplane with inoperative instruments and equipment with and without an MEL.
c. requirements and procedures for obtaining a special flight permit.

2. Locating and explaining—

a. airworthiness directives.
b. compliance records.
c. maintenance/inspection requirements.
d. appropriate record keeping.

I. AREA OF OPERATION: PREFLIGHT PREPARATION

TASK B: AIRWORTHINESS REQUIREMENTS (ASEL and ASES)

References: 14 CFR parts **39**, 91; FAA-H-8083-25.

Objective: To determine that the applicant exhibits **satisfactory** knowledge of the elements related to airworthiness requirements by:

1. Explaining—

- **a.** required instruments and equipment for day/night VFR.
- **b.** procedures and limitations for determining airworthiness of the airplane with inoperative instruments and equipment with and without an MEL.
- **c.** requirements and procedures for obtaining a special flight permit.

2. Locating and explaining—

- **a.** airworthiness directives.
- **b.** compliance records.
- **c.** maintenance/inspection requirements.
- **d.** appropriate record keeping.

I. AREA OF OPERATION: PREFLIGHT PREPARATION

C. TASK: WEATHER INFORMATION (ASEL and ASES)

REFERENCES: 14 CFR part 91; AC 00-6, AC 00-45, AC 61-23/FAA-H-8083-25, AC 61-84; AIM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to weather information by analyzing weather reports, charts, and forecasts from various sources with emphasis on—
   - **a.** METAR, TAF, and FA.
   - **b.** surface analysis chart.
   - **c.** radar summary chart.
   - **d.** winds and temperature aloft chart.
   - **e.** significant weather prognostic charts.
   - **f.** convective outlook chart.
   - **g.** AWOS, ASOS, and ATIS reports.
2. Makes a competent “go/no-go” decision based on available weather information.

I. AREA OF OPERATION: PREFLIGHT PREPARATION

TASK C: WEATHER INFORMATION (ASEL and ASES)

References: 14 CFR part 91; AC 00-6, AC 00-45; AC 61-84; FAAH-8083-25; AIM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to weather information by analyzing weather reports, charts, and forecasts from various sources with emphasis on—
   - **a.** METAR, TAF, and FA.
   - **b.** surface analysis chart.
   - **c.** radar summary chart.
   - **d.** winds and temperature aloft chart.
   - **e.** significant weather prognostic charts.
   - **f.** convective outlook chart.
   - **g.** AWOS, ASOS, and ATIS reports.
   - **h. SIGMETs and AIRMETs.**
   - **i. PIREPs.**
   - **j. windshear reports.**
   - **k. icing and freezing level information.**
2. Makes a competent “go/no-go” decision based on available weather information.

I. AREA OF OPERATION: PREFLIGHT PREPARATION

D. TASK: CROSS-COUNTRY FLIGHT PLANNING (ASEL and ASES)

REFERENCES: 14 CFR part 91; AC 61-23/FAA-H-8083-25, AC 61-84; Navigation Charts; A/FD; AIM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to cross-country flight planning by presenting and explaining a pre-planned VFR cross-country flight, as previously assigned by the examiner. On the day of the practical test, the final flight plan shall be to the first fuel stop, based on maximum allowable passengers, baggage, and/or cargo loads using real time weather.
2. Uses appropriate and current aeronautical charts.
3. Properly identifies airspace, obstructions, and terrain features.
4. Selects easily identifiable en route checkpoints.
5. Selects most favorable altitudes considering weather conditions and equipment capabilities.
6. Computes headings, flight time, and fuel requirements.
7. Selects appropriate navigation system/facilities and communication frequencies.
8. Applies pertinent information from NOTAMs, A/FD, and other flight publications.
9. Completes a navigation log and simulates filing a VFR flight plan.

I. AREA OF OPERATION: PREFLIGHT PREPARATION

TASK D: CROSS-COUNTRY FLIGHT PLANNING (ASEL and ASES)

References: 14 CFR part 91; FAA-H-8083-25; AC 61-84; Navigation Charts; AFD; AIM; **NOTAMS**.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to cross-country flight planning by presenting and explaining a pre-planned VFR cross-country flight, as previously assigned by the examiner. On the day of the practical test, the final flight plan shall be to the first fuel stop, based on maximum allowable passengers, baggage, and/or cargo loads using real-time weather.
2. Uses appropriate and current aeronautical charts.
3. Properly identifies airspace, obstructions, and terrain features.
4. Selects easily identifiable en route checkpoints.
5. Selects most favorable altitudes considering weather conditions and equipment capabilities.
6. Computes headings, flight time, and fuel requirements.
7. Selects appropriate navigation system/facilities and communication frequencies.
8. **Applies pertinent information from AFD, NOTAMs, and NOTAMS relative to airport, runway and taxiway closures, and other flight publications.**
9. Completes a navigation log and simulates filing a VFR flight plan.

I. AREA OF OPERATION: PREFLIGHT PREPARATION

E. TASK: NATIONAL AIRSPACE SYSTEM (ASEL and ASES)

REFERENCES: 14 CFR part 71, 91; Navigation Charts; AIM.

Objective. To determine that the applicant exhibits knowledge of the elements related to the National Airspace System by explaining:

1. Basic VFR weather minimums—for all classes of airspace.

2. Airspace classes—their operating rules, pilot certification, and airplane equipment requirements for the following—

a. Class A.
b. Class B.
c. Class C.
d. Class D.
e. Class E.
f. Class G.

3. Special use and other airspace areas.

I. AREA OF OPERATION: PREFLIGHT PREPARATION

TASK E: NATIONAL AIRSPACE SYSTEM (ASEL and ASES)

References: 14 CFR parts 71, 91, 93; Navigation Charts; AIM.

Objective: To determine that the applicant exhibits **satisfactory** knowledge of the elements related to the National Airspace System by explaining:

1. Basic VFR weather minimums—for all classes of airspace.
2. Airspace classes—their operating rules, pilot certification, and airplane equipment requirements for the following—
   - **a.** Class A.
   - **b.** Class B.
   - **c.** Class C.
   - **d.** Class D.
   - **e.** Class E.
   - **f.** Class G.
3. Special use, **special flight rules areas,** and other airspace areas.

I. AREA OF OPERATION: PREFLIGHT PREPARATION

F. TASK: PERFORMANCE AND LIMITATIONS (ASEL and ASES)

REFERENCES: AC 61-23/FAA-H-8083-25; FAA-H-8083-1; AC 61-84, POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to performance and limitations by explaining the use of charts, tables, and data to determine performance and the adverse effects of exceeding limitations.
2. Computes weight and balance. Determines if the computed weight and center of gravity is within the airplane's operating limitations and if the weight and center of gravity will remain within limits during all phases of flight.
3. Demonstrates use of the appropriate performance charts, tables, and data.
4. Describes the effects of atmospheric conditions on the airplane's performance.

I. AREA OF OPERATION: PREFLIGHT PREPARATION

TASK F: PERFORMANCE AND LIMITATIONS (ASEL and ASES)

References: FAA-H-8083-1, FAA-H-8083-25; AC 61-84; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to performance and limitations by explaining the use of charts, tables, and data to determine performance and the adverse effects of exceeding limitations.
2. Computes weight and balance. Determines the computed weight and center of gravity are within the airplane's operating limitations and if the weight and center of gravity will remain within limits during all phases of flight.
3. Demonstrates use of the appropriate **manufacturer's** performance charts, tables, and data.
4. Describes the effects of atmospheric conditions on the airplane's performance.

I. AREA OF OPERATION: PREFLIGHT PREPARATION

G. TASK: OPERATION OF SYSTEMS (ASEL and ASES)

REFERENCES: AC 61-23/FAA-H-8083-25; POH/AFM.

Objective. To determine that the applicant exhibits knowledge of the elements related to the operation of systems on the airplane provided for the practical test, by explaining at least five (5) of the following systems.

1. Primary flight controls and trim.

2. Flaps, leading edge devices, and spoilers.

3. Water rudders (ASES).

4. Powerplant and propeller.

5. Landing gear.

6. Fuel, oil, and hydraulic.

7. Electrical.

8. Avionics.

9. Pitot-static, vacuum/pressure and associated flight instruments.

10. Environmental.

11. Deicing and anti-icing.

I. AREA OF OPERATION: PREFLIGHT INSPECTION

TASK G: OPERATION OF SYSTEMS (ASEL and ASES)

References: FAA-H-8083-25, **FAA-H-8083-23**; POH/AFM.

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

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

I. AREA OF OPERATION: PREFLIGHT PREPARATION

J. TASK: AEROMEDICAL FACTORS (ASEL and ASES)

REFERENCES: AC 61-23/FAA-H-8083-25; AIM.

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

1. The symptoms, causes, effects, and corrective actions of at least four (4) of the following—

- **a.** hypoxia.
- **b.** hyperventilation.
- **c.** middle ear and sinus problems.
- **d.** spatial disorientation.
- **e.** motion sickness.
- **f.** carbon monoxide poisoning.
- **g.** stress and fatigue.
- **h.** dehydration.

2. The effects of alcohol, drugs, and over-the-counter medications.

3. The effects of excess nitrogen during scuba dives upon a pilot or passenger in flight.

I. AREA OF OPERATION: PREFLIGHT INSPECTION

TASK J: AEROMEDICAL FACTORS (ASEL and ASES)

References: FAA-H-8083-25; AIM.

Objective: **Satisfactory** knowledge of the elements related to aeromedical factors by explaining:

1. The symptoms, causes, effects, and corrective actions of at least **three** of the following—
   - **a.** hypoxia.
   - **b.** hyperventilation.
   - **c.** middle ear and sinus problems.
   - **d.** spatial disorientation.
   - **e.** motion sickness.
   - **f.** carbon monoxide poisoning.
   - **g.** stress and fatigue.
   - **h.** dehydration.
2. The effects of alcohol, drugs, and over-the-counter medications.
3. The effects of excess nitrogen during scuba dives upon a pilot or passenger in flight

II. AREA OF OPERATION: PREFLIGHT PROCEDURES

A. TASK: PREFLIGHT INSPECTION (ASEL and ASES)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

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1. Exhibits knowledge of the elements related to preflight inspection. This **shall include** which items must be inspected, the reasons for checking each item, and how to detect possible defects.
2. Inspects the airplane with reference to an appropriate checklist.
3. Verifies that the airplane is in condition for safe flight.

II. AREA OF OPERATION: PREFLIGHT PROCEDURES

TASK A: PREFLIGHT INSPECTION (ASEL and ASES)

References: FAA-H-8083-3, **FAA-H-8083-23**; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to preflight inspection. This **shall include** which items must be inspected, the reasons for checking each item, and how to detect possible defects.
2. Inspects the airplane with reference to an appropriate checklist.
3. Verifies the airplane is in condition for safe flight.

II. AREA OF OPERATION: PREFLIGHT PROCEDURES

B. TASK: COCKPIT MANAGEMENT (ASEL and ASES)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to cockpit management procedures.
2. Ensures all loose items in the cockpit and cabin are secured.
3. Organizes material and equipment in an efficient manner so they are readily available.
4. Briefs occupants on the use of safety belts, shoulder harnesses, doors, and emergency procedures.

II. AREA OF OPERATION: PREFLIGHT PROCEDURES

TASK B: COCKPIT MANAGEMENT (ASEL and ASES)

References: FAA-H-8083-3; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to cockpit management procedures.
2. Ensures all loose items in the cockpit and cabin are secured.
3. Organizes material and equipment in an efficient manner so they are readily available.
4. Briefs occupants on the use of safety belts, shoulder harnesses, doors, and emergency procedures.

II. AREA OF OPERATION: PREFLIGHT PROCEDURES

C. TASK: ENGINE STARTING (ASEL and ASES)

REFERENCES: FAA-H-8083-3, AC 61-23/FAA-H-8083-25, AC 91-13, AC 91-55; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to recommended engine starting procedures. This **shall include** the use of an external power source, hand propping safety, and starting under various atmospheric conditions.
2. Positions the airplane properly considering structures, surface conditions other aircraft, and the safety of nearby persons and property.
3. Utilizes the appropriate checklist for starting procedure

II. AREA OF OPERATION: PREFLIGHT PROCEDURES

TASK C: ENGINE STARTING (ASEL and ASES)

References: FAA-H-8083-3, **FAA-H-8083-23**, FAA-H-8083-25; AC 91-13, AC 91-55; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to recommended engine starting procedures. This **shall include** the use of an external power source, hand propping safety, and starting under various atmospheric conditions.
2. Positions the airplane properly considering structures, surface conditions, other aircraft, and the safety of nearby persons and property.
3. Utilizes the appropriate checklist for starting procedure.

II. AREA OF OPERATION: PREFLIGHT PROCEDURES

D. TASK: TAXIING (ASEL)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to safe taxi procedures.
2. Performs a brake check immediately after the airplane begins moving.
3. Positions flight controls properly for the existing wind conditions.
4. Controls direction and speed without excessive use of brakes.
5. Complies with airport/taxiway markings, signals, ATC clearances and instructions.
6. Taxies so as to avoid other aircraft and hazards.

II. AREA OF OPERATION: PREFLIGHT PROCEDURES

TASK D: TAXIING (ASEL)

References: FAA-H-8083-3; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to safe taxi procedures **at towered and non-towered airports.**
2. Performs a brake check immediately after the airplane begins moving.
3. Positions the flight controls properly for the existing wind conditions.
4. Controls direction and speed without excessive use of brakes.
5. **Exhibits procedures for steering, maneuvering, maintaining taxiway, runway position, and situational awareness to avoid runway incursions.**
6. **Exhibits proper positioning of the aircraft relative to hold lines.**
7. **Exhibits procedures to insure clearances/instructions are received and recorded/read back correctly.**
8. **Exhibits situational awareness/taxi procedures in the event the aircraft is on a taxiway that is between parallel runways.**
9. **Uses a taxi chart during taxi.**
10. Complies with airport/taxiway markings, signals, ATC clearances, and instructions.
11. Utilizes procedures for eliminating pilot distractions.
12. Taxiing to avoid other aircraft/**vehicles** and hazards

SUPERSEDED COMMERCIAL PTS

Runway Incursion Avoidance is a new task and was not in this PTS that was recently superseded.

II. AREA OF OPERATION: PREFLIGHT PROCEDURES

TASK F: RUNWAY INCURSION AVOIDANCE (ASEL and ASES)

References: FAA-H-8083-3, FAA-H-8083-25; AC 91-73, AC 150-5340-18; AIM.

Objective: To determine that the applicant exhibits knowledge of the elements of runway incursion avoidance by:

1. Exhibiting distinct challenges and requirements during taxi operations not found in other phases of flight operations.
2. Exhibiting procedures for appropriate cockpit activities during taxiing including taxi route planning, briefing the location of HOT SPOTS, communicating and coordinating with ATC.
3. E**T**xhibiting procedures for steering, maneuvering, maintaining taxiway, runway position, and situational awareness.
4. Knowing the relevance/importance of hold lines.
5. Exhibiting procedures to ensure the pilot maintains strict focus to the movement of the aircraft and ATC communications, including the elimination of all distractive activities (i.e. cell phone, texting, conversations with passengers) during aircraft taxi, takeoff and climb out to cruise altitude.
6. Utilizing procedures for holding the pilot's workload to a minimum during taxi operations.
7. Utilizing taxi operation planning procedures, such as recording taxi instructions, reading back taxi clearances, and reviewing taxi routes on the airport diagram,
8. Utilizing procedures to insure that clearance or instructions that are actually received are adhered to rather than the ones expected to be received.
9. Utilizing procedures to maintain/enhance situational awareness when conducting taxi operations in relation to other aircraft operations in the vicinity as well as to other vehicles moving on the airport.
10. Exhibiting procedures for briefing if a landing rollout to a taxiway exit will place the pilot in close proximity to another runway which can result in a runway incursion.
11. Conducting appropriate after landing/taxi procedures in the event the aircraft is on a taxiway that is between parallel runways.
12. Knowing specific procedures for operations at an airport with an operating air traffic control tower, with emphasis on ATC communications and runway entry/crossing authorizations.
13. Utilizing ATC communications and pilot actions before takeoff, before landing, and after landing at towered and non-towered airports.
14. Knowing procedures unique to night operations.
15. Knowing operations at non-towered airpor
16. Knowing the use of aircraft exterior lighting.
17. Knowing the hazards of Low visibiliy operations.

II. AREA OF OPERATION: PREFLIGHT PROCEDURES

F. TASK: BEFORE TAKEOFF CHECK (ASEL and ASES)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to the before takeoff check. This **shall include** the reasons for checking each item and how to detect malfunctions.
2. Positions the airplane properly considering other aircraft/vessels, wind and surface conditions.
3. Divides attention inside and outside the cockpit**.**
4. Ensures the engine temperatures and pressure are suitable for run-up and takeoff.
5. Accomplishes the before takeoff checklist and ensures the airplane is in safe operating condition.
6. Reviews takeoff performance airspeeds, takeoff distances, departure and emergency procedures.
7. Avoids runway incursion and/or ensures no conflict with traffic prior to taxiing into takeoff position.

II. AREA OF OPERATION: PREFLIGHT PROCEDURES

TASK G: BEFORE TAKEOFF CHECK (ASEL and ASES)

References: FAA-H-8083-3, **FAA-H-8083-23**; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to the before takeoff check. This **shall include** the reasons for checking each item and how to detect malfunctions.
2. Positions the airplane properly considering other aircraft/vessels, wind, and surface conditions.
3. Divides attention inside and outside the cockpit.
4. Ensures that engine temperature(s) and pressure(s) are suitable for runup and takeoff.
5. Accomplishes the before takeoff checklist and ensures the airplane is in safe operating condition **as recommended by the manufacturer.**
6. Reviews takeoff performance, such as airspeeds, takeoff distances, departure, and emergency procedures.
7. Avoids runway incursions and ensures no conflict with traffic prior to taxiing into takeoff position.

III. AREA OF OPERATION: AIRPORT AND SEAPLANE BASE OPERATIONS

A. TASK: RADIO COMMUNICATIONS AND ATC LIGHT SIGNALS (ASEL and ASES)

REFERENCES: 14 CFR part 91; AC 61-23/FAA-H-8083-25; AIM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to radio communications and ATC light signals.
2. Selects appropriate frequencies.
3. Transmits using recommended phraseology.
4. Acknowledges radio communications and complies with instructions.

III. AREA OF OPERATION: AIRPORT AND SEAPLANE BASE OPERATION

TASK A: RADIO COMMUNICATIONS AND ATC LIGHT SIGNALS (ASEL and ASES)

References: 14 CFR part 91; FAA-H-8083-25; AIM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to radio communications and ATC light signals.
2. Selects appropriate frequencies.
3. Transmits using **AIM specified phraseology and procedures.**
4. Acknowledges radio communications and complies with instructions.

III. AREA OF OPERATION: AIRPORT AND SEAPLANE BASE OPERATIONS

B. TASK: TRAFFIC PATTERNS (ASEL and ASES)

REFERENCES: FAA-H-8083-3, AC 61-23/FAA-H-8083-25, AC 90-66; AIM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to traffic patterns. This **shall include** procedures at airports with and without operating control towers, prevention of runway incursions, collision avoidance, wake turbulence avoidance, and wind shear.
2. Complies with proper traffic pattern procedures.
3. Maintains proper spacing from other aircraft.
4. Corrects for wind-drift to maintain proper ground track.
5. Maintains orientation with runway/landing area in use.
6. Maintains traffic pattern altitude ±100 feet (30 meters), and appropriate airspeed ±10 knots.

III. AREA OF OPERATION: AIRPORT AND SEAPLANE BASE OPERATION

TASK B: TRAFFIC PATTERNS (ASEL and ASES)

References: FAA-H-8083-3, FAA-H-8083-25; AC 90-66; AIM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to traffic patterns. This shall include procedures at airports with and without operating control towers, prevention of runway incursions, collision avoidance, wake turbulence avoidance, and wind shear.
2. **Properly identifies and interprets airport/seaplane base runways, taxiway signs, markings, and lighting.**
3. Complies with proper traffic pattern procedures.
4. Maintains proper spacing from other aircraft.
5. Corrects for wind drift to maintain the proper ground track.
6. Maintains orientation with the runway/landing area in use.
7. Maintains traffic pattern altitude, ±100 feet, and the appropriate airspeed, ±10 knots.

III. AREA OF OPERATION: AIRPORT AND SEAPLANE BASE OPERATIONS

C. TASK: AIRPORT/SEAPLANE BASE, RUNWAY, AND TAXIWAY SIGNS, MARKINGS, AND LIGHTING (ASEL and ASES)

REFERENCES: AC 61-23/FAA-H-8083-25; AIM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to airport/seaplane base, runway, and taxiway operations with emphasis on runway incursion avoidance.

2. Properly identifies and interprets airport/seaplane base, runway, and taxiway signs, markings, and lighting.

III. AREA OF OPERATION: AIRPORT AND SEAPLANE BASE OPERATION

TASK C: AIRPORT/SEAPLANE BASE, RUNWAY, AND TAXIWAY SIGNS, MARKINGS, AND LIGHTING (ASEL and ASES)

References: **FAA-H-8083-23**, FAA-H-8083-25; AIM; **AFD; AC 91-73, AC 150-5340-18**.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to airport/seaplane base, runway, and taxiway operations with emphasis on runway incursion avoidance.
2. Properly identifies and interprets airport/seaplane base, runway, and taxiway signs,markings, and lighting, with emphasis on runway incursion avoidance.

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

A. TASK: NORMAL AND CROSSWIND TAKEOFF AND CLIMB (ASEL and ASES)

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

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to normal and crosswind takeoff, climb operations and rejected takeoff procedures.
2. Positions the flight controls for the existing wind conditions.
3. Clears the area, taxies onto the takeoff surface and aligns the airplane on the runway center/takeoff path.
4. Retracts the water rudders as appropriate (ASES), and advances the throttle smoothly to takeoff power.
5. Establishes and maintains the most efficient planing/lift off attitude and corrects for porpoising and skipping (ASES).
6. Lifts off at the recommended airspeed, and accelerates to VY.
7. Establishes a pitch attitude that will maintain VY, ±5 knots.
8. Retracts the landing gear if appropriate, and flaps after a positive rate of climb is established.
9. Maintains takeoff power and VY ±5 knots to a safe maneuvering altitude.
10. Maintains directional control, proper wind-drift correction throughout the takeoff and climb.
11. Complies with noise abatement procedures.
12. Completes appropriate checklists.

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

TASK A: NORMAL AND CROSSWIND TAKEOFF AND CLIMB (ASEL and ASES)

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

References: FAA-H-8083-3, **FAA-H-8083-23**; POH/AFM.

Objective: To determine that the applicant:

1. **Utilizes procedures before taxiing onto the runway or takeoff area to ensure runway incursion avoidance. Verify ATC clearance/no aircraft on final at non-towered airports before entering the runway, and ensure that the aircraft is on the correct takeoff runway.**
2. Exhibits **satisfactory** knowledge of the elements related to a normal and crosswind takeoff, climb operations, and rejected takeoff procedures.
3. **Ascertains wind direction with or without visible wind direction indicators.**
4. **Calculates/determines if crosswind component is above his or her ability or that of the aircraft's capability.**
5. Positions the flight controls for the existing wind conditions.
6. Clears the area, taxies onto the takeoff surface, and aligns the airplane on the runway center/takeoff path.
7. Retracts the water rudders as appropriate (ASES), and advances the throttle smoothly to takeoff power.
8. Establishes and maintains the most efficient planing/lift off attitude and corrects for porpoising and skipping (ASES).
9. **Rotates and** lifts off at the recommended airspeed and accelerates to VY.
10. Establishes a pitch attitude that will maintain VY,±5 knots.
11. Retracts the landing gear, if appropriate, and flaps after a positive rate of climb is established.
12. Maintains takeoff power and VY ±5 knots to a safe maneuvering altitude.
13. Maintains directional control, proper wind-drift correction throughout the takeoff and climb.
14. Complies with **responsible environmental practices, to include** noise abatement procedures.
15. Completes appropriate checklists.

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

B. TASK: NORMAL AND CROSSWIND APPROACH AND LANDING (ASEL and ASES)

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

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to normal and crosswind approach and landing.
2. Adequately surveys the intended landing area (ASES).
3. Considers the wind conditions, landing surface, obstructions, and selects a suitable touchdown point.
4. Establishes the recommended approach and landing configuration and airspeed and adjusts pitch attitude and power as required.
5. Maintains a stabilized approach and recommended airspeed, or in its absence, not more than 1.3 VSO, ±5 knots, with wind gust factor applied.
6. Makes smooth, timely, and correct control application during the roundout and touchdown.
7. Contacts the water at the proper pitch attitude (ASES).
8. Touches down smoothly at approximate stalling speed (ASEL).
9. Touches down at or within 200 feet (60 meters) beyond a specified point, with no drift, and with the airplane's longitudinal axis aligned with and over the runway center/landing path.
10. Maintains crosswind correction and directional control throughout the approach and landing sequence.
11. Completes appropriate checklist.

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

TASK B: NORMAL AND CROSSWIND APPROACH AND LANDING

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

References: FAA-H-8083-3, **FAA-H-8083-23**; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to a normal and crosswind approach and landing with emphasis on proper use and coordination of flight controls.
2. Adequately surveys the intended landing area (ASES).
3. Considers the wind conditions, landing surface, obstructions, and selects a suitable touchdown point.
4. Establishes the recommended approach and landing configuration and airspeed, and adjusts pitch attitude and power as required.
5. Maintains a stabilized approach and recommended airspeed, or in its absence, not more than 1.3 VSO, ±5 knots, with wind gust factor applied.
6. Makes smooth, timely, and correct control application during the round out and touchdown.
7. Contacts the water at the proper pitch attitude (ASES).
8. Touches down smoothly at approximate stalling speed (ASEL).
9. Touches down **within the available runway or water landing area**, within 200 feet beyond a specified point with no drift, and with the airplane's longitudinal axis aligned with and over the runway center/landing path.
10. Maintains crosswind correction and directional control throughout the approach and landing sequence.
11. **Executes a timely go around decision when the approach cannot be made within the tolerances specified above.**
12. **Utilizes after landing runway incursion avoidance procedures.**
13. Completes the appropriate checklist.

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

C. TASK: SOFT-FIELD TAKEOFF AND CLIMB (ASEL)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a soft-field takeoff and climb.
2. Positions the flight controls for existing conditions and to maximize lift as quickly as possible.
3. Clears the area; taxies onto takeoff surface at a speed consistent with safety without stopping while advancing the throttle smoothly to takeoff power.
4. Establishes and maintains a pitch attitude that will transfer the weight of the airplane from the wheels to the wings as rapidly as possible.
5. Lifts off at the lowest possible airspeed and remains in ground effect while accelerating to VX or VY, as appropriate.
6. Establishes a pitch attitude for VX or VY, as appropriate, and maintains selected airspeed ±5 knots, during the climb.
7. Retracts the landing gear, if appropriate and flaps after clear of any obstacles or as Recommended by the manufacturer.
8. Maintains takeoff power and VX or VY Å}5 knots to a safe maneuvering altitude.
9. Maintains directional control and proper wind-drift correction throughout the takeoff and climb.
10. Completes appropriate checklist.

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

TASK C: SOFT-FIELD TAKEOFF AND CLIMB (ASEL)

References: FAA-H-8083-3; POH/AFM.

Objective: To determine that the applicant:

1. **Utilizes procedures before taxiing onto the runway or takeoff area to ensure runway incursion avoidance. Verify ATC clearance/no aircraft on final at non-towered airports before entering the runway, and ensure that the aircraft is on the correct takeoff runway.**
2. Exhibits **satisfactory** knowledge of the elements related to a soft-field takeoff and climb.
3. Positions the flight controls for existing conditions and to maximize lift as quickly as possible.
4. Clears the area; taxies onto takeoff surface at a speed consistent with safety and aligns the airplane without stopping while advancing the throttle smoothly to takeoff power.
5. Establishes and maintains a pitch attitude that will transfer the weight of the airplane from the wheels to the wings as rapidly as possible.
6. **Rotates and** lifts off at the lowest possible airspeed and remains in ground effect while accelerating to VX or VY, as appropriate.
7. Establishes a pitch attitude for VX or VY, as appropriate, and maintains selected airspeed ±5 knots during the climb.
8. Retracts the landing gear, if appropriate, and flaps after clear of any obstacles or as recommended by the manufacturer.
9. Maintains takeoff power and VX or VY ±5 knots to a safe maneuvering altitude.
10. Maintains directional control and proper wind-drift correction throughout the takeoff and climb.
11. Completes appropriate checklist.

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

D. TASK: SOFT-FIELD APPROACH AND LANDING (ASEL)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a soft-field approach and landing.
2. Considers the wind conditions, landing surface, and obstructions, and selects the most suitable touchdown area.
3. Establishes the recommended approach and landing configuration and airspeed; adjusts pitch attitude and power as required.
4. Maintains a stabilized approach and recommended airspeed, or in its absence, not more than 1.3 VSO, ±5 knots, with wind gust factor applied.
5. Makes smooth, timely, and correct control application during the roundout and touchdown.
6. Touches down softly, with no drift, and with the airplane's longitudinal axis aligned with the runway/landing path.
7. Maintains crosswind correction and directional control throughout the approach and landing sequence.
8. Maintains proper position of the flight controls and sufficient speed to taxi on the soft surface.
9. Completes appropriate checklist.

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

TASK D: SOFT-FIELD APPROACH, AND LANDING (ASEL)

References: FAA-H-8083-3; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to a soft-field approach and landing.
2. Considers the wind conditions, landing surface, and obstructions, and selects the most suitable touchdown area.
3. Establishes the recommended approach and landing configuration and airspeed; adjusts pitch attitude and power as required.
4. Maintains a stabilized approach and **manufacturer's** recommended airspeed, or in its absence, not more than 1.3 VSO, ±5 knots, with wind gust factor applied.
5. Makes smooth, timely, and correct control application during the round out and touchdown.
6. Touches down softly, with no drift, and with the airplane's longitudinal axis aligned with the runway/landing path.
7. Maintains crosswind correction and directional control throughout the approach and landing sequence.
8. Maintains proper position of the flight controls and sufficient speed to taxi on the soft surface.
9. **Utilizes after landing runway incursion avoidance procedures.**
10. Completes appropriate checklist.

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

E. TASK: SHORT-FIELD TAKEOFF (CONFINED AREA—ASES) AND MAXIMUM PERFORMANCE CLIMB (ASEL and ASES)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a short-field (confined area ASES) takeoff and maximum performance climb.
2. Positions the flight controls for the existing wind conditions, sets flaps as recommended.
3. Clears the area; taxies into takeoff position utilizing maximum available takeoff area and aligns the airplane on the runway center/takeoff path.
4. Selects an appropriate take-off path for the existing conditions (ASES).
5. Applies brakes (if appropriate) while advancing the throttle smoothly to takeoff power.
6. Establishes and maintains the most efficient planing/lift off attitude and corrects for porpoising and skipping (ASES).
7. Lifts off at the recommended airspeed, and accelerates to recommended obstacle clearance airspeed, or VX.
8. Establishes a pitch attitude that will maintain the recommended obstacle clearance airspeed, or VX,,+5/-0 knots, until the obstacle is cleared, or until the airplane is 50 feet (20 meters) above the surface.
9. After clearing the obstacle, establishes the pitch attitude for VY, accelerates to VY, and maintains VY, ±5 knots, during the climb.
10. Retracts the landing gear, if appropriate and flaps after clear of any obstacles or as recommended by manufacturer.
11. Maintains takeoff power and VY ±5 knots to a safe maneuvering altitude.
12. Maintains directional control and proper wind-drift correction throughout the takeoff and climb.
13. Completes appropriate checklist.

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

TASK E: SHORT-FIELD TAKEOFF (CONFINED AREA—ASES) AND MAXIMUM PERFORMANCE CLIMB (ASEL and ASES)

References: FAA-H-8083-3, FAA-H-8083-23; POH/AFM.

Objective: To determine that the applicant:

1. **Utilizes procedures before taxiing onto the runway or takeoff area to ensure runway incursion avoidance. Verify ATC clearance/no aircraft on final at non-towered airports before entering the runway, and ensure that the aircraft is on the correct takeoff runway.**
2. Exhibits **satisfactory** knowledge of the elements related to a short-field (confined area ASES) takeoff and maximum performance climb.
3. Positions the flight controls for the existing wind conditions, sets flaps as recommended.
4. Clears the area; taxies into takeoff position utilizing maximum available takeoff area and aligns the airplane on the runway center/takeoff path.
5. Selects an appropriate takeoff path for the existing conditions (ASES).
6. Applies brakes (if appropriate) while advancing the throttle smoothly to takeoff power.
7. Establishes and maintains the most efficient planning/lift off attitude and corrects for proposing and skipping (ASES).
8. **Rotates and** lifts off at the recommended airspeed, and accelerates to recommended obstacle clearance airspeed, or VX.
9. Establishes a pitch attitude that will maintain the recommended obstacle clearance airspeed, or VX,+5/-0 knots, until the obstacle is cleared, or until the airplane is 50 feet above the surface.
10. After clearing the obstacle, establishes the pitch attitude for VY, accelerates to VY, and maintains VY, ±5 knots, during the climb.
11. Retracts the landing gear, if appropriate, and flaps after clear of any obstacles or as recommended by manufacturer.
12. Maintains takeoff power and VY ±5 knots to a safe maneuvering altitude.
13. Maintains directional control and proper wind-drift correction throughout the takeoff and climb.
14. Completes appropriate checklist

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

F. TASK: SHORT-FIELD APPROACH (CONFINED AREA—ASES) AND LANDING (ASEL AND ASES)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a short-field(confined area ASES) approach and landing.
2. Adequately surveys the intended landing area (ASES).
3. Considers the wind conditions, landing surface, obstructions, and selects the most suitable touchdown point.
4. Establishes the recommended approach and landing configuration and airspeed; adjusts pitch attitude and power.
5. Maintains a stabilized approach and recommended approach airspeed, or in its absence, not more than 1.3 VSO, ±5 knots, with wind gust factor applied.
6. Makes smooth, timely, and correct control application during the roundout and touchdown.
7. Selects the proper landing path, contacts the water at the minimum safe airspeed with the proper pitch attitude for the surface conditions (ASES).
8. Touches down smoothly at minimum control airspeed (ASEL).
9. Touches down at or within 100 feet (30 meters) beyond a specified point, with no side drift, minimum float and with the airplane's longitudinal axis aligned with and over the runway center/landing path.
10. Maintains crosswind correction and directional control throughout the approach and landing sequence.
11. Applies brakes (ASEL) or elevator control (ASES), as necessary, to stop in the shortest distance consistent with safety.
12. Completes appropriate checklist.

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

TASK F: SHORT-FIELD APPROACH (CONFINED AREA—ASES) AND LANDING
(ASEL and ASES)

References: FAA-H-8083-3, **FAA-H-8083-23**; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to a short-field (confined area ASES) approach and landing.
2. Adequately surveys the intended landing area (ASES).
3. Considers the wind conditions, landing surface, obstructions, and selects the most suitable touchdown point.
4. Establishes the recommended approach and landing configuration and airspeed; adjusts pitch attitude and power.
5. Maintains a stabilized approach and recommended approach airspeed, or in its absence, not more than 1.3 VSO, ±5 knots, with wind gust factor applied.
6. Makes smooth, timely, and correct control application during the round out and touchdown.
7. Selects the proper landing path, contacts the water at the minimum safe airspeed with the proper pitch attitude for the surface conditions (ASES).
8. Touches down smoothly at minimum control airspeed (ASEL).
9. Touches down **within the available runway or water landing area**, at or within 100 feet beyond a specified point, with no side drift, minimum float, and with the airplane's longitudinal axis aligned with and over the runway center/landing path.
10. Maintains crosswind correction and directional control throughout the approach and landing sequence.
11. Applies brakes (ASEL), or elevator control (ASES), as necessary, to stop in the shortest distance consistent with safety.
12. Utilizes after landing runway incursion avoidance procedures.
13. Completes appropriate checklist.

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

K. TASK: POWER-OFF 180° ACCURACY APPROACH AND LANDING (ASEL and ASES)

REFERENCE: FAA-H-8083-3.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a power-off 180° accuracy approach and landing.
2. Considers the wind conditions, landing surface, obstructions, and selects an appropriate touchdown point.
3. Positions airplane on downwind leg, parallel to landing runway, and not more than 1000 feet AGL.
4. Abeam the specified touchdown point, closes throttle and establishes appropriate glide speed.
5. Completes final airplane configuration.
6. Touches down in a normal landing attitude, at or within 200 feet (60 meters) beyond the specified touchdown point.
7. Completes the appropriate checklist.

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

TASK K: POWER-OFF 180° ACCURACY APPROACH AND LANDING (ASEL and ASES)

Reference: FAA-H-8083-3.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to a power-off 180° accuracy approach and landing.
2. Considers the wind conditions, landing surface, obstructions, and selects an appropriate touchdown point.
3. Positions airplane on downwind leg, parallel to landing runway, and not more than 1,000 feet AGL.
4. Completes final airplane configuration.
5. Touches down in a normal landing attitude, at or within 200 feet beyond the specified touchdown point.
6. Completes the appropriate checklist.

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

L. TASK: GO-AROUND/REJECTED LANDING (ASEL and ASES)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a goaround/ rejected landing.
2. Makes a timely decision to discontinue the approach to landing.
3. Applies takeoff power immediately and transitions to climb pitch attitude for VY, and maintains VY ±5 knots.
4. Retracts flaps as appropriate.
5. Retracts the landing gear if appropriate after a positive rate of climb is established.
6. Maneuvers to the side of runway/landing area to clear and avoid conflicting traffic.
7. Maintains takeoff power and VY ±5 knots to a safe maneuvering altitude.
8. Maintains directional control and proper wind-drift correction throughout the climb.
9. Completes the appropriate checklist.

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

TASK L: GO-AROUND/REJECTED LANDING (ASEL and ASES)

References: FAA-H-8083-3, FAA-H-8083-23; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to a go-around/rejected landing, with emphasis on factors that contribute to landing conditions that may require a go around.
2. Makes a timely decision to discontinue the approach to landing.
3. Applies takeoff power immediately and transitions to climb pitch attitude for VX or VY as appropriate +10/–5 knots **and/or appropriate pitch attitude.**
4. Retracts flaps as appropriate.
5. Retracts the landing gear if appropriate after a positive rate of climb is established.
6. Maneuvers to the side of runway/landing area to clear and avoid conflicting traffic.
7. Maintains takeoff power and VY +10/-5 knots to a safe maneuvering altitude.
8. Maintains directional control and proper wind-drift correction throughout the climb.
9. Completes the appropriate checklist.

V. AREA OF OPERATION: PERFORMANCE MANEUVERS

NOTE: The examiner shall at least select either TASK A or B, and either C or D.

A. TASK: STEEP TURNS (ASEL and ASES)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to steep turns.
2. Establishes the manufacturer's recommended airspeed or if one is not stated, a safe airspeed not to exceed VA.
3. Rolls into a coordinated 360° steep turn with at least a 50° bank followed by a 360° steep turn in the opposite direction.
4. Divides attention between airplane control and orientation.
5. Maintains the entry altitude, ±100 feet (30 meters), airspeed, ±10 knots, bank, ±5°; and rolls out on the entry heading, ±10°.

V. AREA OF OPERATION: PERFORMANCE MANEUVERS

NOTE: The examiner shall at least select either Task A or B, and either C or D.

TASK A: STEEP TURNS (ASEL and ASES)

References: FAA-H-8083-3; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to steep turns.
2. Establishes the manufacturer's recommended airspeed or if one is not stated, a safe airspeed not to exceed VA.
3. Rolls into a coordinated 360° steep turn with at least a 50° bank, followed by a 360° steep turn in the opposite direction.
4. Divides attention between airplane control and orientation.
5. Maintains the entry altitude, ±100 feet, airspeed, ±10 knots, bank, ±5°; and rolls out on the entry heading, ±10°.

V. AREA OF OPERATION: PERFORMANCE MANEUVERS

B. TASK: STEEP SPIRAL (ASEL and ASES)

REFERENCE: FAA-H-8083-3.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a steep spiral.
2. Selects an altitude sufficient to continue through a series of at least three 360° turns.
3. Selects a suitable ground reference point.
4. Applies wind-drift correction to track a constant radius circle around selected reference point with bank not to exceed 60° at steepest point in turn.
5. Divides attention between airplane control and ground track, while maintaining coordinated flight.
6. Maintains the specified airspeed, ±10 knots, rolls out toward object or specified heading, ±10°.

V. AREA OF OPERATION: PERFORMANCE MANEUVERS

TASK B: STEEP SPIRAL (ASEL and ASES)

Reference: FAA-H-8083-3.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to a steep spiral, **not to exceed 60° angle of bank to maintain a constant radius about a point.**
2. Selects an altitude sufficient to continue through a series of at least three 360° turns.
3. Selects a suitable ground reference point.
4. Applies wind-drift correction to track a constant radius circle around selected reference point with bank not to exceed 60° at steepest point in turn.
5. Divides attention between airplane control and ground track, while maintaining coordinated flight.
6. Maintains the specified airspeed, ±10 knots, rolls out toward object or specified heading, ±10°.

V. AREA OF OPERATION: PERFORMANCE MANEUVERS

C. TASK: CHANDELLES (ASEL and ASES)

REFERENCE: FAA-H-8083-3.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to chandelles.
2. Selects an altitude that will allow the maneuver to be performed no lower than 1,500 feet AGL (460 meters).
3. Establishes the recommended entry configuration, power, and airspeed.
4. Establishes the angle of bank at approximately 30°.
5. Simultaneously applies power and pitch to maintain a smooth, coordinated climbing turn to the 90° point, with a constant bank.
6. Begins a coordinated constant rate rollout from the 90° point to the 180° point maintaining power and a constant pitch attitude.
7. Completes rollout at the 180° point, ±10° just above a stall airspeed, and maintaining that airspeed momentarily avoiding a stall.
8. Resumes straight and level flight with minimum loss of altitude.

V. AREA OF OPERATION: PERFORMANCE MANEUVERS

TASK C: CHANDELLES (ASEL and ASES)

Reference: FAA-H-8083-3.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to chandelles.
2. Selects an altitude that will allow the maneuver to be performed no lower than 1,500 feet AGL.
3. Establishes the recommended entry configuration, power, and airspeed.
4. Establishes the angle of bank at approximately 30°.
5. Simultaneously applies power and pitch to maintain a smooth, coordinated climbing turn to the 90° point, with a constant bank.
6. Begins a coordinated constant rate rollout from the 90° point to the 180° point maintaining power and a constant pitch attitude.
7. Completes rollout at the 180° point, ±10° just above a stall airspeed, and maintaining that airspeed momentarily avoiding a stall.
8. Resumes straight-and-level flight with minimum loss of altitude.

V. AREA OF OPERATION: PERFORMANCE MANEUVERS

D. TASK: LAZY EIGHTS (ASEL and ASES)

REFERENCE: FAA-H-8083-3.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to lazy eights.
2. Selects an altitude that will allow the task to be performed no lower than 1,500 feet AGL (460 meters).
3. Establishes the recommended entry configuration, power, and airspeed.
4. Maintains coordinated flight throughout the maneuver.
5. Achieves the following throughout the maneuver—
   - **a.** approximately 30° bank at the steepest point.
   - **b.** constant change of pitch and roll rate.
   - **c.** altitude tolerance at 180° points, ±100 feet (30 meters) from entry altitude.
   - **d.** airspeed tolerance at the 180° point plus ±10° knots from entry airspeed.
   - **e.** heading tolerance at the 180° point ±10°.
6. Continues the maneuver through the number of symmetrical loops specified and resumes straight and level flight.

V. AREA OF OPERATION: PERFORMANCE MANEUVERS

TASK D: LAZY EIGHTS (ASEL and ASES)

Reference: FAA-H-8083-3.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to lazy eights.
2. Selects an altitude that will allow the task to be performed no lower than 1,500 feet AGL.
3. Establishes the recommended entry configuration, power, and airspeed.
4. Maintains coordinated flight throughout the maneuver.
5. Achieves the following throughout the maneuver—
   - **a.** approximately 30° bank at the steepest point.
   - **b.** constant change of pitch and roll rate.
   - **c.** altitude tolerance at 180° point, ±100 feet from entry altitude.
   - **d.** airspeed tolerance at the 180° point, plus ±10 knots from entry airspeed.
   - **e.** heading tolerance at the 180° point, ±10°.
6. Continues the maneuver through the number of symmetrical loops specified and resumes straight-and-level flight.

VI. AREA OF OPERATION: GROUND REFERENCE MANEUVER

TASK: EIGHTS ON PYLONS (ASEL and ASES)

REFERENCE: FAA-H-8083-3.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to eights on pylons.
2. Determines the approximate pivotal altitude.
3. Selects suitable pylons, that will permit straight and level flight, between the pylons.
4. Enters the maneuver at the appropriate altitude and airspeed and at a bank angle of approximately 30° to 40° at the steepest point.
5. Applies the necessary corrections so that the line-of-sight reference line remains on the pylon.
6. Divides attention between accurate coordinated airplane control and outside visual references.
7. Holds pylon using appropriate pivotal altitude avoiding slips and skids.

VI. AREA OF OPERATION: GROUND REFERENCE MANEUVER

TASK A: EIGHTS ON PYLONS (ASEL and ASES)

Reference: FAA-H-8083-3.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to eights on pylons.
2. Determines the approximate pivotal altitude.
3. Selects suitable pylons that will permit straight-and-level flight between the pylons.
4. Enters the maneuver at the appropriate altitude and airspeed and at a bank angle of approximately 30° to 40° at the steepest point.
5. Applies the necessary corrections so that the line-of-sight reference line remains on the pylon.
6. Divides attention between accurate coordinated airplane control and outside visual references.
7. Holds pylon using appropriate pivotal altitude avoiding slips and skids.

VII. AREA OF OPERATION: NAVIGATION

A. TASK: PILOTAGE AND DEAD RECKONING (ASEL and ASES)

REFERENCE: AC 61-23/FAA-H-8083-25.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to pilotage and dead reckoning.
2. Follows the preplanned course by reference to landmarks.
3. Identifies landmarks by relating surface features to chart symbols.
4. Navigates by means of precomputed headings, groundspeed, and elapsed time.
5. Corrects for and records differences between preflight groundspeed and heading calculations and those determined en route.
6. Verifies the airplane's position within two (2) nautical miles of flight planned route.
7. Arrives at the en route checkpoints within three (3) minutes of the initial or revised ETA and provides a destination estimate.
8. Maintains appropriate altitude, ±100 feet (30 meters), and headings, ±10°.

VII. AREA OF OPERATION: NAVIGATION

TASK A: PILOTAGE AND DEAD RECKONING (ASEL and ASES)

References: FAA-H-8083-25; **Navigation Chart**.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to pilotage and dead reckoning.
2. Follows the preplanned course by reference to landmarks.
3. Identifies landmarks by relating surface features to chart symbols.
4. Navigates by means of precomputed headings, groundspeeds, and elapsed time.
5. Demonstrates the use of magnetic compass in navigation, to include turns to new headings.
6. Corrects for and records differences between preflight groundspeed and heading calculations and those determined en route.
7. Verifies the airplane's position within 2 nautical miles of flight planned route.
8. Arrives at the en route checkpoints within 3 minutes of the initial or revised ETA and provides a destination estimate.
9. Maintains appropriate altitude, ±100 feet, and headings, ±10°.

VII. AREA OF OPERATION: NAVIGATION

B. TASK: NAVIGATION SYSTEMS AND RADAR SERVICES (ASEL and ASES)

REFERENCES: FAA-H-8083-3, AC 61-23/FAA-H-8083-25; Navigation Equipment Operation Manuals, AIM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to navigation systems and radar services.
2. Demonstrates the ability to use an airborne electronic navigation system.
3. Locates the airplane's position using the navigation system.
4. Intercepts and tracks a given course, radial, or bearing as appropriate.
5. Recognizes and describes the indication of station passage if appropriate.
6. Recognizes signal loss and takes appropriate action.
7. Uses proper communication procedures when utilizing radar services.
8. Maintains the appropriate altitude, ±100 feet (30 meters) and heading, ±10°.

VII. AREA OF OPERATION: NAVIGATION

TASK B: NAVIGATION SYSTEMS AND RADAR SERVICES (ASEL and ASE S)

References: FAA-H-8083-3, FAA-H-8083-25; Navigation Equipment Operation Manuals; AIM; **FAA-H-8083-2.**

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to navigation systems and radar services.
2. Demonstrates the ability to use an airborne electronic navigation system.
3. Locates the airplane's position using the navigation system.
4. Intercepts and tracks a given course, radial, or bearing as appropriate.
5. Recognizes and describes the indication of station passage if appropriate.
6. Recognizes signal loss and takes appropriate action.
7. Uses proper communication procedures when utilizing radar services.
8. Maintains the appropriate altitude, ±100 feet and heading, ±10°.

VII. AREA OF OPERATION: NAVIGATION

C. TASK: DIVERSION (ASEL and ASES)

REFERENCES: FAA-H-8083-25; AIM

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to diversion.
2. Selects an appropriate alternate airport and route.
3. Makes an accurate estimate of heading, groundspeed, arrival time, and fuel consumption to the alternate airport.
4. Maintains the appropriate altitude, ±100 feet (30 meters), and heading, ±10°.

VII. AREA OF OPERATION: NAVIGATION

TASK C: DIVERSION (ASEL and ASES)

References: FAA-H-8083-25; AIM; **Navigation Chart**.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to diversion.
2. Selects an appropriate alternate airport and route.
3. Makes an accurate estimate of heading, groundspeed, arrival time, and fuel consumption to the alternate airport.
4. Maintains the appropriate altitude, ±100 feet, and heading, ±10°.

VII. AREA OF OPERATION: NAVIGATION

D. TASK: LOST PROCEDURES (ASEL and ASES)

REFERENCES**:** FAA-H-8083-25; AIM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to lost procedures.
2. Selects an appropriate course of action.
3. Maintains an appropriate heading and climbs, if necessary.
4. Identifies prominent landmarks.
5. Uses navigation systems/facilities and/or contacts an ATC facility for assistance as appropriate.

VII. AREA OF OPERATION: NAVIGATION

TASK D: LOST PROCEDURES (ASEL and ASES)

References: FAA-H-8083-25; AIM; **Navigation Chart**.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to lost procedures.
2. Selects an appropriate course of action.
3. Maintains an appropriate heading and climbs, if necessary.
4. Identifies prominent landmarks.
5. Uses navigation systems/facilities and/or contacts an ATC facility for assistance, as appropriate.

VIII. AREA OF OPERATION: SLOW FLIGHT AND STALLS

A. TASK: MANEUVERING DURING SLOW FLIGHT (ASEL and ASES)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to maneuvering during slow flight.
2. Selects an entry altitude that will allow the task to be completed no lower than 1,500 feet (460 meters) AGL.
3. Establishes and maintains an airspeed at which any further increase in angle of attack, increase in load factor, or reduction in power, would result in an immediate stall.
4. Accomplishes coordinated straight-and-level flight, turns, climbs, and descents with landing gear and flap configurations specified by the examiner.
5. Divides attention between airplane control and orientation.
6. Maintains the specified altitude, ±50 feet (15 meters); specified heading, ±10°; airspeed +5/–0 knots, and specified angle of bank, ±5°.

VIII. AREA OF OPERATION: SLOW FLIGHT AND STALLS

NOTE: *In accordance with FAA policy, all stalls for the Commercial rating will be taken to the "onset" (buffeting) stall condition.*

TASK A: MANEUVERING DURING SLOW FLIGHT (ASEL and ASES)

References: FAA-H-8083-3; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to maneuvering during slow flight.
2. Selects an entry altitude that will allow the task to be completed no lower than 1,500 feet AGL.
3. Establishes and maintains an airspeed at which any further increase in angle of attack, increase in load factor, or reduction in power, would result in an immediate stall.
4. Accomplishes coordinated straight-and-level flight, turns, climbs, and descents with landing gear and flap configurations specified by the examiner.
5. Divides attention between airplane control and orientation.
6. Maintains the specified altitude, ±50 feet; specified heading, ±10°;

VIII. AREA OF OPERATION: SLOW FLIGHT AND STALLS

B. TASK: POWER-OFF STALLS (ASEL and ASES)

REFERENCES: FAA-H-8083-3, AC 61-67; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to power-off stalls.
2. Selects an entry altitude that allows the task to be completed no lower than 1,500 feet (460 meters) AGL.
3. Establishes a stabilized descent in the approach or landing configuration, as specified by the examiner.
4. Transitions smoothly from the approach or landing attitude to a pitch attitude that will induce a stall.
5. Maintains a specified heading, ±10° in straight flight; maintains a specified angle of bank, not to exceed 20°, ±5°, in turning flight while inducing the stall.
6. Recognizes and recovers promptly as the stall occurs by simultaneously reducing the angle of attack, increasing power to maximum allowable, and leveling the wings to return to a straight-and-level flight attitude with a minimum loss of altitude appropriate for the airplane.
7. Retracts the flaps to the recommended setting, retracts the landing gear if retractable after a positive rate of climb is established.
8. Accelerates to VX or VY speed before the final flap retraction; returns to the altitude, heading, and airspeed specified by the examiner.

VIII. AREA OF OPERATION: SLOW FLIGHT AND STALLS

NOTE: *In accordance with FAA policy, all stalls for the Commercial rating will be taken to the "onset" (buffeting) stall condition.*

TASK B: POWER-OFF STALLS (ASEL and ASES)

References: FAA-H-8083-3; AC 61-67; POH/AFM.

NOTE: When published, the aircraft manufacturer's procedures for the specific make/mode/series aircraft take precedent over the identification and recovery procedures described in paragraphs 6, 7, and 8 below.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to power-off stalls.
2. Selects an entry altitude that allows the task to be completed no lower than 1,500 feet AGL.
3. Establishes a stabilized descent **approximating a 3 degree final approach or landing descent rate** in the landing configuration, as specified by the examiner.
4. Transitions smoothly from the approach or landing attitude to a pitch attitude that will induce a stall.
5. Maintains a specified heading, ±10°, if in straight flight; maintains a specified angle of bank, not to exceed 20°, ±5°, if in turning flight while inducing the stall.
6. Recognizes and recovers promptly as the stall occurs by simultaneously reducing the angle of attack, increasing power to maximum allowable, and leveling the wings to return to a straight-and-level flight attitude **without exceeding the aircraft's limitations or losing excessive altitude consistent with the aircraft's performance capabilities. It is expected that some loss of altitude may occur during the recovery.**

NOTE: 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 which affect the recovery altitude.

7. Retracts the flaps to the recommended setting, retracts the landing gear if retractable after a positive rate of climb is established.
8. Accelerates to VX or VY speed before the final flap retraction; returns to the **normal climb attitude**, airspeed, **and configuration or** an altitude, heading, and airspeed specified by the examiner.

VIII. AREA OF OPERATION: SLOW FLIGHT AND STALLS

C. TASK: POWER-ON STALLS (ASEL and ASES)

REFERENCES: FAA-H-8083-3, AC 61-67; POH/AFM.

NOTE: *In some high performance airplanes, the power setting may have to be reduced below the practical test standards guideline power setting to prevent excessively high pitch attitudes (greater than 30° nose up).*

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to power-on stalls.

2. Selects an entry altitude that allows the task to be completed no lower than 1,500 feet (460 meters) AGL.

3. Establishes the takeoff or departure configuration. Sets power to no less than 65 percent available power.

4. Transitions smoothly from the takeoff or departure attitude to a pitch attitude that will induce a stall.

5. Maintains a specified heading ±5°, in straight flight; maintains a specified angle of bank, not to exceed a 20°, ±10°, in turning flight, while inducing the stall.

6. Recognizes and recovers promptly as the stall occurs by simultaneously reducing the angle of attack, increasing power to maximum allowable, and leveling the wings to return to a straight-and- level flight attitude, with a minimum loss of altitude appropriate for the airplane.

7. Retracts flaps to the recommended setting, retracts the landing gear if retractable, after a positive rate of climb is established.

8. Accelerates to VX or VY speed before the final flap retraction; returns to the altitude, heading, and airspeed specified by the examiner.

VIII. AREA OF OPERATION: SLOW FLIGHT AND STALLS

NOTE: *In accordance with FAA policy, all stalls for the Commercial rating will be taken to the "onset" (buffeting) stall condition.*

TASK C: POWER-ON STALLS (ASEL and ASES)

NOTE: In some high performance airplanes, the power setting may have to be reduced below the practical test standards guideline power setting to prevent excessively high pitch attitudes (greater than 30° nose up).

References: FAA-H-8083-3; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to power-on stalls.
2. Selects an entry altitude that allows the task to be completed no lower than 1,500 feet AGL.
3. Establishes the takeoff or departure configuration as specified by the examiner. Sets power to no less than 65 percent available power.
4. Transitions smoothly from the takeoff or departure attitude to a pitch attitude that will induce a stall.
5. Maintains a specified heading ±10°, in straight flight; maintains a specified angle of bank, not to exceed a 20°, ±10°, in turning flight, while inducing the stall.
6. Recognizes and recovers promptly as the stall occurs by simultaneously reducing the angle of attack, increasing power to maximum allowable, and leveling the wings to return to a straight-and-level flight attitude **without exceeding the aircraft's limitations or losing excessive altitude consistent with the aircraft's performance capabilities. It is expected that some loss of altitude may occur during the recovery.**

NOTE: 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 which affect the recovery altitude.

7. Retracts flaps to the recommended setting, retracts the landing gear, if retractable, after a positive rate of climb is established.
8. Accelerates to VX or VY speed before the final flap retraction; returns to the **normal climb attitude, airspeed, and configuration or an** altitude, heading, and airspeed specified by the examiner.

Accelerated stalls is a new task and was not in this PTS that was recently superseded

VIII. AREA OF OPERATION: SLOW FLIGHT AND STALLS

NOTE: *In accordance with FAA policy, all stalls for the Commercial rating will be taken to the "onset" (buffeting) stall condition.*

TASK D: ACCELERATED STALLS (ASEL and ASES)

References: FAA-H-8083-3; AC 61-67; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to accelerated (power on or power off) stalls.
2. Selects an entry altitude that allows the task to be completed no lower than 3,000 feet AGL.
3. Establishes the airplane in a steady flight condition, airspeed below VA, 20 knots above unaccelerated stall speed or the manufacturer's recommendations.
4. Transitions smoothly from the cruise attitude to the angle of bank of approximately 45° that will induce a stall.
5. Maintains coordinated turning flight, increasing elevator back pressure steadily and firmly to induce the stall.
6. Recognizes and recovers promptly at the onset of a stall by simultaneously reducing the angle of bank, decreasing pitch, increasing power as appropriate, and leveling the wings to return to a straight-and-level flight attitude with a minimum loss of altitude appropriate for the airplane.
7. Returns to the altitude, heading, and airspeed specified by the examiner

VIII. AREA OF OPERATION: SLOW FLIGHT AND STALLS

D. TASK: SPIN AWARENESS (ASEL and ASES)

REFERENCES: FAA-H-8083-3, AC 61-67; POH/AFM*.*

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

1. Aerodynamic factors related to spins.

2. Flight situations where unintentional spins may occur.

3. Procedures for recovery from unintentional spins.

VIII. AREA OF OPERATION: SLOW FLIGHT AND STALLS

NOTE: ***In accordance with FAA policy, all stalls for the Commercial rating will be taken to the "onset" (buffeting) stall condition.***

TASK E: SPIN AWARENESS (ASEL and ASES)

References: FAA-H-8083-3; AC 61-67; POH/AFM.

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

1. Aerodynamic factors related to spins.

2. Flight situations where unintentional spins may occur.

3. Procedures for recovery from unintentional spins.

SUPERSEDED COMMERCIAL PTS

Emergency Descent is a new task and was not in this PTS that was recently superseded.

IX. AREA OF OPERATION: EMERGENCY OPERATIONS

TASK A: EMERGENCY DESCENT (ASEL and ASES)

References: FAA-H-8083-3; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to an emergency descent.
2. Recognizes situations, such as depressurization, cockpit smoke and/or fire that require an emergency descent.
3. Establishes the appropriate airspeed, ±10 knots, and configuration for the emergency descent.
4. Exhibits orientation, division of attention, and proper planning.
5. Maintains positive load factors during the descent.
6. Maintains appropriate airspeed, +0/–10 knots, and levels off at specified altitude, ±100 feet.
7. Completes appropriate checklists.

IX. AREA OF OPERATION: EMERGENCY OPERATIONS

A. TASK: EMERGENCY APPROACH AND LANDING (SIMULATED) (ASEL and ASES)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to emergency approach and landing procedures.
2. Analyzes the situation and selects an appropriate course of action.
3. Establishes and maintains the recommended best glide airspeed, ±10 knots.
4. Selects a suitable landing area.
5. Plans and follows a flight pattern to the selected landing area considering altitude, wind, terrain, and obstructions.
6. Prepares for landing, or go-around, as specified by the examiner.
7. Follows the appropriate checklist.

IX. AREA OF OPERATION: EMERGENCY OPERATIONS

TASK B: EMERGENCY APPROACH AND LANDING (SIMULATED) (ASEL and ASES)

References: FAA-H-8083-3, **FAA-H-8083-23**; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to emergency approach and landing procedures.
2. Analyzes the situation and selects an appropriate course of action.
3. Establishes and maintains the recommended best glide airspeed, ±10 knots.
4. Selects a suitable landing area.
5. Plans and follows a flight pattern to the selected landing area considering altitude, wind, terrain, and obstructions.
6. Prepares for landing, or go-around, as specified by the examiner.
7. Follows the appropriate checklist.

IX. AREA OF OPERATION: EMERGENCY OPERATIONS

B. TASK: SYSTEMS AND EQUIPMENT MALFUNCTIONS (ASEL and ASES)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to systems and equipment malfunctions appropriate to the airplane provided for the practical test.
2. Analyzes the situation and takes appropriate action for simulated emergencies appropriate to the airplane provided for the practical test for at least five (5) of the following:
   - **a.** partial or complete power loss.
   - **b.** engine roughness or overheat.
   - **c.** carburetor or induction icing.
   - **d.** loss of oil pressure.
   - **e.** fuel starvation.
   - **f.** electrical malfunction.
   - **g.** vacuum/pressure, and associated flight instruments malfunction.
   - **h.** pitot/static.
   - **i.** landing gear or flap malfunction.
   - **j.** inoperative trim.
   - **k.** inadvertant door or window opening.
   - **l.** structural icing.
   - **m.** smoke/fire/engine compartment fire.
   - **n.** any other emergency appropriate to the airplane.
3. Follows the appropriate checklist or procedure.

IX. AREA OF OPERATION: EMERGENCY OPERATIONS

TASK C: SYSTEMS AND EQUIPMENT MALFUNCTIONS (ASEL and ASES)

References: FAA-H-8083-3; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to systems and equipment malfunctions appropriate to the airplane provided for the practical test.
2. Analyzes the situation and takes appropriate action for simulated emergencies appropriate to the airplane provided for the practical test for at least five of the following:
    - **a.** partial or complete power loss.
    - **b.** engine roughness or overheat.
    - **c.** carburetor or induction icing.
    - **d.** loss of oil pressure.
    - **e.** fuel starvation.
    - **f.** electrical malfunction.
    - **g.** vacuum/pressure, and associated flight instruments malfunction.
    - **h.** pitot/static system malfunction.
    - **i.** landing gear or flap malfunction.
    - **j.** inoperative trim.
    - **k.** inadvertent door or window opening.
    - **l.** structural icing.
    - **m.** smoke/fire/engine compartment fire.
    - **n.** any other emergency appropriate to the airplane.
3. Follows the appropriate checklist or procedure.

IX. AREA OF OPERATION: EMERGENCY OPERATIONS

C. TASK: EMERGENCY EQUIPMENT AND SURVIVAL GEAR (ASEL and ASES)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

Exhibits knowledge of the elements related to emergency equipment and survival gear appropriate to the airplane and environment encountered during flight. Identifies should be aboard the airplane.

IX. AREA OF OPERATION: EMERGENCY OPERATIONS

TASK D: EMERGENCY EQUIPMENT AND SURVIVAL GEAR (ASEL and ASES)

References: FAA-H-8083-3; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to emergency equipment and survival gear appropriate to the airplane and environment encountered during flight. Identifies appropriate equipment that should be aboard the airplane.

X. AREA OF OPERATION: HIGH ALTITUDE OPERATIONS

A. TASK: SUPPLEMENTAL OXYGEN (ASEL and ASES)

REFERENCES: 14 CFR part 91; FAA-H-8083-3, AC 61-107; AIM; POH/AFM.

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

1. Supplemental oxygen requirements for flight crew and passengers when operating non-pressurized airplanes.
2. Identification and differences between “aviators' breathing oxygen” and other types.
3. Operational characteristics of continuous flow, demand, and pressure-demand oxygen systems.

X. AREA OF OPERATION: HIGH ALTITUDE OPERATIONS

TASK A: SUPPLEMENTAL OXYGEN (ASEL and ASES)

References: 14 CFR part 91; FAA-H-8083-25; AC 61-107; AIM; POH/AFM.

Objective: To determine that the applicant exhibits **satisfactory** knowledge of the elements related to supplemental oxygen by explaining:

1. Supplemental oxygen requirements for flight crew and passengers when operating non-pressurized airplanes.
2. Identification and differences between “aviator’s breathing oxygen” and other types of oxygen.
3. Operational characteristics of continuous flow, demand, and pressure-demand oxygen systems.

X. AREA OF OPERATION: HIGH ALTITUDE OPERATIONS

B. TASK: PRESSURIZATION (ASEL and ASES)

REFERENCES: FAA-H-8083-3, AC 61-107; AIM; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to pressurization by explaining—

a. fundamental concept of cabin pressurization.
b. supplemental oxygen requirements when operating airplanes with pressurized cabins.
c. physiological hazards associated with high altitude flight and decompression.

***NOTE**: Element 2 applies only if the airplane provided for the practical test is equipped for pressurized flight operations.*

2. Operates the pressurization system properly, and reacts appropriately to simulated pressurization malfunctions.

X. AREA OF OPERATION: HIGH ALTITUDE OPERATIONS

TASK B: PRESSURIZATION (ASEL and ASES)

References: FAA-H-8083-3, FAA-H-8083-25A; AC 61-107; AIM; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to pressurization by explaining—
    - **a.** fundamental concept of cabin pressurization.
    - **b.** supplemental oxygen requirements when operating airplanes with pressurized cabins.
    - **c.** physiological hazards associated with high altitude flight and decompression.

NOTE: *Element 2 applies only if the airplane provided for the practical test is equipped for pressurized flight operations.*

2. Operates the pressurization system properly, and reacts appropriately to simulated pressurization malfunctions.

XI. AREA OF OPERATION: POSTFLIGHT PROCEDURES

NOTE: The examiner shall select TASK A and for ASES applicants at least one other TASK.

A. TASK: AFTER LANDING, PARKING, AND SECURING (ASEL and ASES)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to after landing, parking and securing procedures.
2. Maintains directional control after touchdown while decelerating to an appropriate speed.
3. Observes runway hold lines and other surface control markings and lighting.
4. Parks in an appropriate area, considering the safety of nearby persons and property.
5. Follows the appropriate procedure for engine shutdown.
6. Completes the appropriate checklist.
7. Conducts an appropriate postflight inspection and secures the aircraft.

XI. AREA OF OPERATION: POSTFLIGHT PROCEDURES

Task A: AFTER LANDING, PARKING, AND SECURING (ASEL and ASES)

NOTE: The examiner shall select Task A and for ASES applicants at least one other Task.

References: FAA-H-8083-3, FAA-H-8083-23; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits **satisfactory** knowledge of the elements related to after landing, parking, and securing procedures.
2. Maintains directional control after touchdown while decelerating to an appropriate speed.
3. Observes runway hold lines and other surface control markings and lighting.
4. Parks in an appropriate area, considering the safety of nearby persons and property.
5. Follows the appropriate procedure for engine shutdown.
6. Completes the appropriate checklist.
7. Conducts an appropriate post flight inspection and secures the aircraft.

NEW TASKS

Runway Incursion Avoidance

Accelerated Stalls

Emergency Descent