

# F5 CAP Pilot Flight Evaluation

## F5 PROCEDURE

The instructions for a F5 CAP Pilot Flight Evaluation appear on page 3 of the form. These instructions specify how to conduct a CAP Pilot Flight Evaluation (CAPF 5) in accordance with this regulation.

The CAP Check Pilot evaluates the CAP member on:

- Ability to satisfactorily perform the tasks assigned;
- Knowledge of procedures; and
- Smoothness, judgment and mastery of the aircraft.

The CAPF-5 CAP pilot flight evaluation consists of discussion of an oral discussion, preflight preparation, and a flight evaluation of at least 1 hour in duration and including 3 takeoffs and landings (there are separate guidelines for an abbreviated CAPF5 to add another aircraft in the same category and class).

The check pilot will provide a Plan of Action for the applicant including a departure and destination airport, and expected route.

The applicant must complete the appropriate briefing documents, fly the assigned tasks, complete the post-flight debrief, and complete the post-flight documents. The Check Pilot may evaluate satisfactory knowledge of the subject by oral quizzing. The applicant must also demonstrate the ability to show mastery of the aircraft, with the successful outcome of a procedure or maneuver never seriously in doubt. (Does the Check Pilot trust you to fly his/her loved ones?) The applicant must be able to demonstrate the proper usage of any equipment in the aircraft used for the evaluation. This includes ALL avionics.

## Complete the Paperwork

You will need to complete the preliminaries in Ops Quals prior to the Flight Evaluation:

1. In Pilot|FAA Requirements, enter your current FAA Certificates, FAA Instructor Ratings, Medical or Basic Medical, Flight Review, and click "Submit." Upload all documents, including a high performance endorsement if you wish to fly the C182.
2. Take the online Aircraft Ground Handling Course and pass the exam.
3. Take the CAPR 70-1 exam online and pass the exam.
4. If this is your first CAP Pilot Flight Evaluation, please sign the online Statement of Understanding

## Schedule the Flight Evaluation

When you have your paperwork ready, fill out the Request A Checkride form and we will work out a mutually convenient date and time.

Please keep in mind that a CAP Pilot Flight Evaluation typically takes about 4 hours:

- Oral discussion            1-1.5 hrs
- Preflight                    30 mins
- Flight                        1.5-2 hrs
- Post-flight                 30mins

This is if everything goes smoothly. So when scheduling with me for your flight evaluation, be sure to schedule a time that has plenty of leeway. I suggest planning a 6hr block so there is no rush to finish and be somewhere by xx o'clock.

## On the Day before the Flight Evaluation

On the day before the checkride you will need to arrange with the squadron maintenance officer to go out to the airplane and fill out a Form 71.

After you complete the CAPF 71, scan it and send it to me as a PDF file, along with:

1. CAPF 5 – top part and pilot portion of page 2 filled out and sent as PDF file
2. CAPF 5Q–A for the evaluation airplane – sent as a PDF file

**If I do not receive these three documents on the day before the evaluation, I will assume you have cancelled the flight and I will not show up.**

## Applicant's CAPF 5 Flight Evaluation Checklist

1. Appropriate CAP Uniform
2. WMIRS entry for evaluation sortie (including ORM and W&B)
3. CAP Flight Release (we can do this together during the Oral portion)
4. FAA-compliant weather briefing
5. **View Limiting Device** e.g. "Foggles" (for all flight checks, VFR and IFR) – if you forget this, you cannot complete the Form 5 flight check.
6. FAA Flight Plan
7. Aircraft Manual (including W&B)
8. Current Aeronautical Chart(s)
9. Current IAP (if seeking IFR endorsement)
10. FAR/AIM
11. Flight Computer and Plotter
12. Qualification Records
  - a. CAP Membership Card
  - b. Pages from Pilot Logbook (Endorsements, 90-day Currency)
  - c. FAA Pilot Certificate(s)
  - d. FAA Medical or Basic Med
13. Survival Kit (may be in the aircraft) and Personal survival gear

On the day of the flight evaluation you should show up about 30 minutes early. Use this time to unlock retrieve from the airplane the logbooks, POH, AIF, etc to the squadron building where we will be doing the paperwork and oral portion of the flight evaluation.

## Flight Evaluation Plan of Action

The Check Pilot will provide a plan of action to the applicant. This plan will include the airports, airspace, and locations for planned task evaluation. The applicant completes his/her preflight planning and mission paperwork and briefs the Check Pilot with his/her intended actions.

The oral portion of the Check ride will be approximately one hour. You should be familiar with CAPR 70-1, and Part 61 and 91 of the Federal Aviation Regulations. Be prepared to use the performance charts, and review the weight and balance form you uploaded to WMIRS. The flight portion of check ride will be approximately an hour to an hour and a half. If you are seeking a CAP IFR endorsement, then allow for an additional 30-45 minutes so that we can cover these areas. Please remember that you need to be able to safely and proficiently fly to the ACS standards based on the pilot certificate you hold. You will be evaluated on your skills as PIC; you will be expected to have proficient cockpit resource skills and be able to handle everything by yourself including the radios, checklists, and ATC clearances, etc.

Please remember that once the Form 5 Check Ride starts, it must terminate with a Satisfactory, Unsatisfactory, or Incomplete (due to mechanical factors, weather, etc). The flight will not convert into a "training" flight.

Common areas which may result in an Unsatisfactory include: lack of safety awareness, not using checklists, "heads down" in the cockpit while taxiing, not performing clearing turns prior to maneuvers, not being familiar with ground reference maneuvers on the CAPF5, not being able to maintain ACS standards on maneuvers (generally  $\pm 100$ ft,  $10^\circ$ , and 10kts), improper/lack of wind correction in turns. Short-field Landing: flying speeds above recommended in POH, poorly planned approaches, too low (not clearing the FAA installed 50' obstacle at the runway threshold), not touching down -0/+200 ft from target.

## Evaluation Criteria

The following explanations correspond to the related sections of CAPF5, 23 Feb 18.

### I. ORAL DISCUSSION

**Objective:** To determine that the applicant understands CAP's regulations and procedures for conducting a CAP Mission Sortie and the rules and conditions for flying a CAP aircraft.

#### A. Annual Online Written Exam

**Acceptable Performance Guidelines:** The applicant shall provide satisfactory evidence of completing the Annual 70-1 exam in CAP's Online Course & Exams.

#### B. Review CAPR 70-1 & Supplements

**Acceptable Performance Guidelines:** The applicant shall demonstrate knowledge of CAPR 70-1, and AZWG Supplements (if applicable). An occasional look-up of a specific regulation MAY be permitted by the Check Pilot. Excessive reference to written materials for answers to oral questions shall be deemed as not meeting standards.

**Reference:** CAPR 70-1, CAPR 66-1.

### **C. Review Flight Release Procedures**

**Acceptable Performance Guidelines:** The applicant shall demonstrate knowledge of flight release procedures, including which missions may be released only by specific release officers, and the conditions under which a SFRO is required. The applicant shall present the TOLD card used to answer the runway distance question for the FRO or SFRO.

**Reference:** CAPR 70-1, TOLD card

### **D. Review CAPF 9 Requirements**

**Acceptable Performance Guidelines:** The applicant shall demonstrate knowledge of when passengers must sign a CAPF 9, and how that form is to be controlled.

**Reference:** CAPR 70-1.

### **E. Local Procedures**

**Acceptable Performance Guidelines:** The applicant shall demonstrate knowledge of AZWG SOPs pertaining to flights in CAP Aircraft.

**Reference:** AZWG SOPs (<http://www.azwg.org>).

### **F. Emergency Procedures**

**Acceptable Performance Guidelines:** The applicant shall be able to recite memory items for Emergency Procedures in the POH and/or CAP Checklists for the evaluation aircraft.

**Reference:** POH, [CAP Approved Checklists](#).

### **G. Electronic Flight Bag**

**Acceptable Performance Guidelines:** If the applicant intends to use an EFB, the applicant shall demonstrate familiarity with CAP and FAA guidelines for use in flight

**Reference:** [Electronic Flight Bag \(EFB\) Guidance](#)

## **II. PREFLIGHT PREPARATION**

**Objective:** To determine that the applicant can satisfactorily plan a CAP sortie by consulting the appropriate information sources.

### **A. Certificates & Documents**

**Acceptable Performance Guidelines:** The applicant shall show the certificates and documents required to be in his/her possession for the planned flight.

**Reference:** CAPR 70-1, 14 CFR Part 61.3,

### **B. Obtaining Weather Information**

**Acceptable Performance Guidelines:** The applicant shall show that a weather briefing that meets regulatory requirements has been obtained for the flight.

**Reference:** 14 CFR Part 91.103.

### **C. Determine Weight and Balance**

**Acceptable Performance Guidelines:** The applicant shall show that a correct weight and balance calculation has been uploaded to WMIRS for the evaluation flight and be able to discuss the effects of changes on the weight and balance calculation, including optimum loading conditions.

**Reference:** POH, Aircraft W&B.

### **D. Determine Takeoff Performance**

**Acceptable Performance Guidelines:** The applicant shall be able to calculate the expected takeoff performance for the conditions prevailing at the time of the evaluation flight by reference to a TOLD card, calculate the pressure altitude at time of takeoff, discuss limitations of performance charts, and actions to be taken upon deviations from expected performance.

**Reference:** POH and Supplements, TOLD card.

### **E. Determine Cruise Performance**

**Acceptable Performance Guidelines:** The applicant shall demonstrate the calculation of cruise performance for the planned flight, including appropriate altitudes for the route of flight, and expected fuel burn.

**Reference:** POH and Supplements.

### **F. Determine Landing Performance**

**Acceptable Performance Guidelines:** The applicant shall calculate the landing distance at the destination airport for the weather conditions forecast at planned time of arrival, calculate the pressure altitude, calculate the landing weight of the aircraft, and discuss the limitations of the performance charts, and actions to be taken upon deviations from expected performance.

**Reference:** POH and Supplements.

### **G. Cross-Country Flight Planning**

**Acceptable Performance Guidelines:** The applicant will prepare, present, and explain a cross-country flight plan assigned by the check pilot including a risk analysis based on real-time weather to the first fuel stop, including weather briefing, weight and balance calculations, takeoff, cruise and landing performance, apply pertinent information from appropriate and current aeronautical charts, chart supplements; NOTAMs relative to airport, runway and taxiway closures; and other flight publications, (including any restrictions for controlled or special use airspace), expected fuel usage, and required fuel reserves, alternate landing sites in event of emergency, and create a navigation plan and simulate filing a VFR flight plan, and recalculate fuel reserves based on a scenario provided by the check pilot.

**Reference:** POH and Supplements. 14 CFR 91.103, ACS

### **G. Aircraft Systems**

**Acceptable Performance Guidelines:** The applicant will demonstrate understanding of the systems in the aircraft, how to determine adequate performance, and actions to be taken in event of system failure

**Reference:** POH and Supplements, ACS

### **G. Aeromedical Factors**

**Acceptable Performance Guidelines:** The applicant will be able to discuss the aeromedical factors affecting the performance of the flight crew for the planned flight, and those generally applicable to the area of operations.

**Reference:** AIM, Ch. 8, ACS

## **III. GROUND OPERATIONS**

**Objective:** To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with preparing for safe flight.

## **A. Visual Inspection**

**Acceptable Performance Guidelines:** The applicant shall demonstrate understanding of which items must be inspected, the reasons for checking each item, how to detect possible defects, and the associated regulations. The applicant shall inspect the airplane with reference to an appropriate checklist, and verify the airplane is in condition for safe flight and conforms to its type design.

**Reference:** IAMSAR.

## **B. Starting Engine**

**Acceptable Performance Guidelines:** The applicant demonstrates understanding of a) starting under various conditions, b) starting the engine by use of external power, and c) engine limitations as they related to starting. The applicant demonstrates the ability to position the airplane properly considering structures, other aircraft, wind, and the safety of nearby persons and property, and to complete the appropriate checklist.

**Reference:** ACS

## **C. Taxiing**

**Acceptable Performance Guidelines:** The applicant demonstrates understanding of: current airport aeronautical references and information resources including chart supplements, airport diagram, and appropriate references, taxi instructions/clearances, airport markings, signs, and lights, visual indicators for wind, aircraft lighting, and procedures for:

- a. Appropriate flight deck activities prior to taxi, including route planning and identifying the location of Hot Spots
- b. Radio communications at towered and nontowered airports
- c. Entering or crossing runways
- d. Night taxi operations
- e. Low visibility taxi operations

The applicant demonstrates the ability to receive and correctly read back clearances/instructions, if applicable use an airport diagram or taxi chart during taxi, if published, and maintain situational awareness, position the flight controls for the existing wind conditions, complete the appropriate checklist, perform a brake check immediately after the airplane begins moving, maintain positive control of the airplane during ground operations by controlling direction and speed without excessive use of brakes, comply with airport/taxiway markings, signals, and ATC clearances and instructions, and position the airplane properly relative to hold lines.

**Reference:** ACS.

## **D. Use of Checklist (mandatory)**

**Acceptable Performance Guidelines:** The applicant demonstrates use of the appropriate checklist.

**Reference:** POH or [CAP Approved Checklists](#).

## **E. Passenger and Crew Briefing**

**Acceptable Performance Guidelines:** The applicant demonstrates appropriate briefing for passengers and crewmembers.

**Reference:.**

## **F. Sterile Cockpit Procedures**

**Acceptable Performance Guidelines:** The applicant demonstrates appropriate briefing on Sterile Cockpit procedures.

**Reference:** [CAP Sterile Cockpit Procedures](#)

## **G. Post-flight Procedures**

**Acceptable Performance Guidelines:** The applicant demonstrates understanding of airplane shutdown, securing, and postflight inspection, and documenting in-flight/postflight discrepancies. The applicant demonstrates the ability follow runway incursion avoidance procedures, park in an appropriate area, considering the safety of nearby persons and property, complete the appropriate checklist, conduct a postflight inspection and document discrepancies and servicing requirements, if any, and secure the airplane.

**Reference:** ACS

## **IV. Airport and Traffic Pattern Ops**

**Objective:** To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with normal and emergency radio communications, ATC light signals, and runway lighting systems to conduct safe airport operations

**Reference:** ACS.

### **A. Radio Comm & ATC Light Signals**

**Acceptable Performance Guidelines:** The applicant demonstrates understanding of: how to obtain proper radio frequencies, proper radio communication procedures and ATC phraseology, and ATC light signal recognition. The applicant demonstrates the ability to: select appropriate frequencies, transmit using phraseology and procedures as specified in the AIM, acknowledge radio communications and comply with instructions.

**Reference:** ACS.

### **B. Surface and Traffic Pattern Operations**

**Acceptable Performance Guidelines:** The applicant demonstrates understanding of: towered and nontowered airport operations, runway selection for the current conditions, right-of-way rules, and use of automated weather and airport information. The applicant demonstrates the ability to: properly identify and interpret airport/seaplane base runways, taxiways, markings, signs, and lighting, comply with recommended traffic pattern procedures, correct for wind drift to maintain the proper ground track, maintain orientation with the runway/landing area in use, maintain traffic pattern altitude,  $\pm 100$  feet, and the appropriate airspeed,  $\pm 10$  knots, and maintain situational awareness and proper spacing from other aircraft in the traffic pattern

**Reference:** ACS.

### **C. Airport & Runway Markings & Lighting**

**Acceptable Performance Guidelines:** The applicant demonstrates understanding of airport lighting aids, aeronautical light beacons, and airport marking aids and signs.

**Reference:** AIM, Chapter 2.

## **V. Takeoff and Climbs**

**Objective:** To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with a normal takeoff, climb operations, and rejected takeoff procedures.

### **A. Normal Takeoff & Climb**

**Acceptable Performance Guidelines:** The applicant demonstrates the ability to: complete the appropriate checklist, make radio calls as appropriate, verify assigned/correct runway, ascertain wind direction with or without visible wind direction indicators, position the flight controls for the existing wind conditions, clear the area, taxi into takeoff position and align the airplane on the runway centerline, confirm takeoff power and proper engine and flight instrument indications prior to rotation, rotate and lift off at the recommended airspeed and accelerate to  $V_y$ , establish a pitch attitude to maintain the manufacturer's recommended speed or  $V_y$ , +10/-5 knots (**Commercial:  $V_y \pm 5$  knots**), configure the airplane in accordance with manufacturer's guidance, maintain  $V_y$  +10/-5 knots (**Commercial:  $V_y \pm 5$  knots**) to a safe maneuvering altitude, maintain directional control and proper wind-drift correction throughout takeoff and climb, and comply with noise abatement procedures.  
**Reference:** ACS.

### **B. Crosswind Takeoff & Climb**

**Acceptable Performance Guidelines:** The applicant demonstrates the ability to maintain directional control and proper wind-drift correction throughout takeoff and climb. *Note: If a crosswind condition does not exist, the applicant's knowledge of crosswind elements must be evaluated through oral testing.*  
**Reference:** ACS

### **C. Short-field Takeoff & Climb**

**Acceptable Performance Guidelines:** The applicant demonstrates the ability to: complete the appropriate checklist, make radio calls as appropriate, verify assigned/correct runway, ascertain wind direction with or without visible wind direction indicators, position the flight controls for the existing wind conditions, clear the area, taxi into takeoff position and align the airplane on the runway centerline utilizing maximum available takeoff area, apply brakes while setting engine power to achieve maximum performance, confirm takeoff power prior to brake release and proper engine and flight instrument indications, rotate and lift off at the recommended airspeed and accelerate to the recommended obstacle clearance airspeed or  $V_x$ , +10/-5 knots (**Commercial:  $V_x \pm 5$  knots**), establish a pitch attitude that will maintain the recommended obstacle clearance airspeed or  $V_x$ , +10/-5 knots (**Commercial:  $V_x \pm 5$  knots**) until the obstacle is cleared or until the airplane is 50 feet above the surface; after clearing the obstacle, establish pitch attitude for  $V_y$ , and accelerate to and maintain  $V_y$  +10/-5 knots (**Commercial:  $V_y \pm 5$  knots**) during the climb, configure the airplane in accordance with manufacturer's guidance after a positive rate of climb has been verified, maintain  $V_y$  +10/-5 knots (**Commercial:  $V_y \pm 5$  knots**) to a safe maneuvering altitude, maintain directional control and proper wind-drift correction throughout takeoff and climb, and comply with noise abatement procedures.  
**Reference:** ACS.

### **D. Soft-field Takeoff & Climb**

**Acceptable Performance Guidelines:** : The applicant demonstrates the ability to: complete the appropriate checklist, make radio calls as appropriate, verify assigned/correct runway, ascertain wind direction with or without visible wind direction indicators, position the flight controls for the existing wind conditions, clear the area, taxi into takeoff position and align the airplane on the runway centerline without stopping, while advancing the throttle smoothly to takeoff power, confirm takeoff power and proper engine and flight instrument indications, establish and maintain a pitch attitude that will transfer the weight of the airplane from the wheels to the wings as rapidly as possible, lift off at the lowest



possible airspeed and remain in ground effect while accelerating to  $V_x$  or  $V_y$ , as appropriate (**Commercial:  $\pm 5$  knots**), establish a pitch attitude to maintain the manufacturer's recommended speed for  $V_x$  or  $V_y$ , as appropriate  $+10/-5$  knots (**Commercial:  $\pm 5$  knots**) during the climb, configure the airplane in accordance with manufacturer's guidance, maintain  $V_x$  or  $V_y$  as appropriate  $+10/-5$  knots (**Commercial:  $\pm 5$  knots**) to a safe maneuvering altitude, maintain directional control and proper wind-drift correction throughout takeoff and climb, and comply with noise abatement procedures.

**Reference:** ACS

## VI. CROSS-COUNTRY FLYING

**Objective:** To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with pilotage and dead reckoning, diversion and lost procedures.

### A. Pilotage & Dead Reckoning

**Acceptable Performance Guidelines:** : The applicant demonstrates the ability to: prepare and use a flight log, navigate by pilotage, navigate by means of pre-computed headings, groundspeeds, and elapsed time, demonstrate use of the magnetic direction indicator in navigation, to include turns to headings, verify position within three nautical miles of the flight-planned route, arrive at the en route checkpoints within five minutes of the initial or revised estimated time of arrival (ETA) and provide a destination estimate, maintain the appropriate altitude,  $\pm 200$  feet and heading,  $\pm 15^\circ$ .

**Reference:** ACS

### B. Radio Navigation

**Acceptable Performance Guidelines:** The applicant demonstrates the ability to: use an airborne electronic navigation system, determine the airplane's position using the navigation system, intercept and track a given course, radial, or bearing, as appropriate, recognize and describe the indication of station or waypoint passage, if appropriate, recognize signal loss or interference and take appropriate action, if applicable, use proper communication procedures when utilizing radar services, and maintain the appropriate altitude  $\pm 200$  feet and heading  $\pm 15^\circ$ .

**Reference:** ACS

### C. Diversion

**Acceptable Performance Guidelines:** : The applicant demonstrates the ability to: select a suitable airport and route for diversion, make a reasonable estimate of heading, groundspeed, arrival time, and fuel consumption to the divert airport, maintain the appropriate altitude  $\pm 200$  feet and heading  $\pm 15^\circ$ , update/interpret weather in flight, explain and use flight deck displays of digital weather and aeronautical information, as applicable.

**Reference:** ACS

### D. Lost Procedures

**Acceptable Performance Guidelines:** The applicant demonstrates the ability to: The applicant demonstrates the ability to: use an appropriate method to determine position, maintain an appropriate heading and climb as necessary, identify prominent landmarks, use navigation systems/facilities and/or contact an ATC facility for assistance.

**Reference:** ACS

## VII. MANEUVERS

**Objective:** To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with maneuvers.

### **A. Power-off Stalls**

**Acceptable Performance Guidelines:** The applicant demonstrates the ability to: clear the area, select an entry altitude that will allow the task to be completed no lower than 1,500 feet AGL, configure the airplane in the approach or landing configuration, as specified by the check pilot, and maintain coordinated flight throughout the maneuver, establish a stabilized descent, transition smoothly from the approach or landing attitude to a pitch attitude that will induce a stall, maintain a specified heading  $\pm 10^\circ$  if in straight flight; maintain a specified angle of bank not to exceed  $20^\circ$ ,  $\pm 10^\circ$  if in turning flight

**(Commercial:  $\pm 5^\circ$ ),** while inducing the stall, acknowledge cues of the impending stall and then recover promptly after a full stall occurs, execute a stall recovery in accordance with procedures set forth in the POH/AFM, configure the airplane as recommended by the manufacturer, and accelerate to  $V_x$  or  $V_y$ , return to the altitude, heading, and airspeed specified by the check pilot.

**Reference:** ACS

### **B. Power-on Stalls**

**Acceptable Performance Guidelines:** The applicant demonstrates the ability to: clear the area, select an entry altitude that will allow the task to be completed no lower than 1,500 feet AGL, establish the takeoff, departure, or cruise configuration, as specified by the check pilot, and maintain coordinated flight throughout the maneuver, set power (as assigned by the check pilot) to no less than 65 percent available power, transition smoothly the takeoff or departure attitude to the pitch attitude that will induce a stall, maintain a specified heading  $\pm 10^\circ$  if in straight flight; maintain a specified angle of bank not to exceed  $20^\circ$ ,  $\pm 10^\circ$  if in turning flight, while inducing the stall, acknowledge cues of the impending stall and then recover promptly after a full stall occurs, execute a stall recovery in accordance with procedures set forth in the POH/AFM, configure the airplane as recommended by the manufacturer, and accelerate to  $V_x$  or  $V_y$ , return to the altitude, heading, and airspeed specified by the check pilot.

**Reference:** ACS

### **C. Maneuvering During Slow Flight**

**Acceptable Performance Guidelines:** The applicant demonstrates the ability to: clear the area, select an entry altitude that will allow the task to be completed no lower than 1,500 feet AGL, establish and maintain an airspeed at which any further increase in angle of attack, increase in load factor, or reduction in power, would result in a stall warning (e.g., airplane buffet, stall horn, etc.), accomplish coordinated straight-and-level flight, turns, climbs, and descents with the airplane configured as specified by the check pilot without a stall warning (e.g., airplane buffet, stall horn, etc.), maintain the specified altitude,  $\pm 100$  feet; specified heading,  $\pm 10^\circ$ ; airspeed,  $+10/-0$  knots; and specified angle of bank,  $\pm 10^\circ$  (Commercial: maintain the specified altitude,  $\pm 50$  feet; specified heading,  $\pm 10^\circ$ ; airspeed,  $+5/-0$  knots; and specified angle of bank,  $\pm 5^\circ$ ).

**Reference:** ACS

### **D. Steep Turns**

**Acceptable Performance Guidelines:** The applicant demonstrates the ability to: clear the area, establish the manufacturer's recommended airspeed; or if one is not available, a safe airspeed not to exceed  $V_a$ , roll into a coordinated  $360^\circ$  steep turn with approximately a  $45^\circ$  bank (**Commercial:  $50^\circ$  bank**), perform the Task in the opposite direction, if specified by the check pilot, maintain the entry altitude,  $\pm 100$  feet; airspeed,  $\pm 10$  knots, bank  $\pm 5^\circ$ , and roll out on the entry heading  $\pm 10^\circ$ .

*Reference:* ACS

## **VIII. INSTRUMENT REF MANEUVERS**

**Objective:** To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with flying solely by reference to instruments.

### **A. Straight & Level Flight**

**Acceptable Performance Guidelines:** The applicant demonstrates the ability to: maintain straight-and-level flight using proper instrument cross-check and interpretation, and coordinated control application, maintain altitude  $\pm 200$  feet, heading  $\pm 20^\circ$ , and airspeed  $\pm 10$  knots

*Reference:* ACS

### **B. Constant Airspeed Climbs**

**Acceptable Performance Guidelines:** The applicant demonstrates the ability to: transition to the climb pitch attitude and power setting on an assigned heading using proper instrument cross-check and interpretation, and coordinated flight control application, demonstrate climbs at a constant airspeed to specific altitudes in straight flight and turns, level off at the assigned altitude and maintain altitude  $\pm 200$  feet, heading  $\pm 20^\circ$ , and airspeed  $\pm 10$  knots

*Reference:* ACS

### **C. Constant Airspeed Descents**

**Acceptable Performance Guidelines:** The applicant demonstrates the ability to: transition to the descent pitch attitude and power setting on an assigned heading using proper instrument cross-check and interpretation, and coordinated flight control application, demonstrate descents at a constant airspeed to specific altitudes in straight flight and turns, level off at the assigned altitude and maintain altitude  $\pm 200$  feet, heading  $\pm 20^\circ$ , and airspeed  $\pm 10$  knots

*Reference:* ACS

### **D. Turns to A Heading**

**Acceptable Performance Guidelines:** The applicant demonstrates the ability to: demonstrate turns to headings, maintain altitude  $\pm 200$  feet, maintain a standard rate turn, roll out on the assigned heading  $\pm 10^\circ$ , and maintain airspeed  $\pm 10$  knots.

*Reference:* ACS

### **E. Recovery from Unusual Flt Attitudes**

**Acceptable Performance Guidelines:** The applicant demonstrates the ability to: recognize unusual flight attitudes; perform the correct, coordinated, and smooth flight control application to resolve unusual pitch and bank attitudes while staying within the airplane's limitations and flight parameters.

*Reference:* ACS

### **F. Radio Nav & Radar Services**

**Acceptable Performance Guidelines:** The applicant demonstrates the ability to: maintain airplane control while selecting proper communications frequencies, identifying the appropriate facility, and managing navigation equipment, comply with ATC instructions, maintain altitude  $\pm 200$  feet, heading  $\pm 20^\circ$ , and airspeed  $\pm 10$  knots.

*Reference:* ACS

## **X. GROUND REFERENCE MANEUVERS**

**Objective:** To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with ground reference maneuvering.

### **A. Rectangular Course**

**Acceptable Performance Guidelines:** The applicant demonstrates the ability to: clear the area, select a suitable ground reference area, line, or point as appropriate, enter a left or right pattern, 600 to 1,000 feet above ground level (AGL) at an appropriate distance from the selected reference area, 45° to the downwind leg, apply adequate wind-drift correction during straight and turning flight to maintain a constant ground track around a rectangular reference area, divide attention between airplane control, traffic avoidance and the ground track while maintaining coordinated flight, maintain altitude  $\pm 100$  feet; maintain airspeed  $\pm 10$  knots.

**Reference:** ACS

### **B. S-Turns**

**Acceptable Performance Guidelines:** The applicant demonstrates the ability to: clear the area, select a suitable ground reference area, line, or point as appropriate, enter perpendicular to the selected reference line, 600 to 1,000 feet AGL at an appropriate distance from the selected reference area, apply adequate wind-drift correction during straight and turning flight to maintain a constant radius turn on each side of a selected reference line or point, reverse the turn directly over the selected reference line; divide attention between airplane control, traffic avoidance and the ground track while maintaining coordinated flight, maintain altitude  $\pm 100$  feet; maintain airspeed  $\pm 10$  knots.

**Reference:** ACS

### **C. Turns Around A Point**

**Acceptable Performance Guidelines:** The applicant demonstrates the ability to: clear the area, select a suitable ground reference area, line, or point as appropriate, enter perpendicular to the selected reference line, 600 to 1,000 feet AGL at an appropriate distance from the selected reference area, apply adequate wind-drift correction during turning flight to maintain a constant radius turn on each side of a selected reference line or point, complete turns in either direction, as specified by the check pilot; divide attention between airplane control, traffic avoidance and the ground track while maintaining coordinated flight, maintain altitude  $\pm 100$  feet; maintain airspeed  $\pm 10$  knots.

**Reference:** ACS

## **XI. NIGHT FLIGHT OPERATIONS**

**Objective:** To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with night operations. **Note:** Not generally evaluated in flight. These elements are familiarization only, and may be required at the discretion of Wing Commanders or higher.

### **A. Physiological aspects of night flying**

**Acceptable Performance Guidelines:** The applicant demonstrates understanding of physiological aspects of vision related to night flying and effects of hypoxia.

**Reference:** ACS

### **B. Preparation & Personal Equipment**

**Acceptable Performance Guidelines:** The applicant demonstrates understanding of personal equipment essential for night flight, and airplane equipment and lighting requirements for night operations.

**Reference:** ACS

### **C. Airport & Airport Lighting**

**Acceptable Performance Guidelines:** The applicant demonstrates understanding of lighting systems identifying airports, runways, taxiways and obstructions, as well as pilot-controlled lighting.

**Reference:** ACS

### **D. Night Orientation and Navigation**

**Acceptable Performance Guidelines:** The applicant demonstrates understanding of night orientation, navigation, and chart reading techniques, and demonstrates the ability to identify, assess and mitigate risks, encompassing: Collision hazards, to include aircraft, terrain, obstacles, and wires, distractions, loss of situational awareness, and/or improper task management, hazards specific to night flying.

**Reference:** ACS

## **XII. EMERGENCY PROCEDURES**

**Objective:** To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with emergencies.

### **A. Emergency Approach & Landing (sim)**

**Acceptable Performance Guidelines:** The applicant demonstrates the ability to: establish and maintain the recommended best glide airspeed,  $\pm 10$  knots, configure the airplane in accordance with the POH/AFM and existing conditions, select a suitable landing area considering altitude, wind, terrain, obstructions, and available glide distance, plan and follow a flightpath to the selected landing area considering altitude, wind, terrain, and obstructions, prepare for landing as specified by the evaluator, and complete the appropriate checklist.

**Reference:** ACS

### **B. System & Equipment Malfunction**

**Acceptable Performance Guidelines:** The applicant demonstrates the ability to: describe appropriate action for simulated emergencies specified by the check pilot, from at least three of these elements or sub-elements listed below, and complete the appropriate checklist.

1. Partial or complete power loss related to the specific powerplant, including:
  - a. Engine roughness or overheat
  - b. Carburetor or induction icing
  - c. Loss of oil pressure
  - d. Fuel starvation
2. System and equipment malfunctions specific to the airplane, including:
  - a. Electrical malfunction
  - b. Vacuum/pressure and associated flight instrument malfunctions
  - c. Pitot/static system malfunction
  - d. Electronic flight deck display malfunction
  - e. Landing gear or flap malfunction
  - f. Inoperative trim
3. Smoke/fire/engine compartment fire.
4. Any other system specific to the airplane (e.g., supplemental oxygen, deicing).
5. Inadvertent door or window opening.

**Reference:** ACS

### **C. POH Bold Face Knowledge**

**Acceptable Performance Guidelines:** The applicant demonstrates understanding of bold face or “memory” items in manufacturer’s or CAP-approved checklist.

**Reference:** ACS

### **D. Emergency Descent**

**Acceptable Performance Guidelines:** The applicant demonstrates the ability to: clear the area, establish and maintain the appropriate airspeed and configuration appropriate to the scenario specified by the check pilot and as covered in POH/AFM for the emergency descent, demonstrate orientation, division of attention and proper planning, use bank angle between 30° and 45° to maintain positive load factors during the descent, maintain appropriate airspeed +0/-10 knots, and level off at a specified altitude ±100 feet, complete the appropriate checklist.

**Reference:** ACS

## **XIII. APPROACHES & LANDINGS**

**Objective:** To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with approaches and landings.

### **A. Normal Approaches and Landings**

**Acceptable Performance Guidelines:** The applicant demonstrates the ability to: complete the appropriate checklist, make radio calls as appropriate, ensure the airplane is aligned with the correct/assigned runway or landing surface, scan runway or landing surface and the adjoining area for traffic and obstructions, consider the wind conditions, landing surface, obstructions, and select a suitable touchdown point, establish the recommended approach and landing configuration and airspeed, and adjust pitch attitude and power as required to maintain a stabilized approach, maintain manufacturer’s published approach airspeed or in its absence not more than 1.3 VSO, +10/-5 knots with gust factor applied (**Commercial: ±5 knots**), make smooth, timely, and correct control application during round out and touchdown, touch down at a proper pitch attitude, within 400 feet beyond or on the specified point, with no side drift (**Commercial: 200 ft**), and with the airplane’s longitudinal axis aligned with and over the runway center/landing path, execute a timely go-around if the approach cannot be made within the tolerances specified above or for any other condition that may result in an unsafe approach or landing, utilize runway incursion avoidance procedures.

**Reference:** ACS

### **B. Crosswind Approaches and Landings**

**Acceptable Performance Guidelines:** The applicant demonstrates the ability to: after turning to final, maintain crosswind correction and directional control to maintain a track along the specified runway extended center line to the point of touchdown, make smooth, timely, and correct control application during round out and touchdown, touch down at a proper pitch attitude, within 400 feet beyond or on the specified point, with no side drift (**Commercial: 200 ft**), and with the airplane’s longitudinal axis aligned with and over the runway center/landing path, execute a timely go-around if the approach cannot be made within the tolerances specified above or for any other condition that may result in an unsafe approach or landing, utilize runway incursion avoidance procedures.

**Reference:** ACS

### **C. Forward Slips to Landing**

**Acceptable Performance Guidelines:** The applicant demonstrates the ability to: complete the appropriate checklist, make radio calls as appropriate, plan and follow a flightpath to the selected landing area considering altitude, wind, terrain, and obstructions, select the most suitable touchdown point based on wind, landing surface, obstructions, and airplane limitations, position airplane on downwind leg, parallel to landing runway, configure the airplane correctly, as necessary, correlate crosswind with direction of forward slip and transition to side slip before touchdown, touch down at a proper pitch attitude, within 400 feet beyond or on the specified point, with no side drift, and with the airplane's longitudinal axis aligned with and over the runway center/landing path, maintain a ground track aligned with the runway center/landing path.

**Reference:** ACS

### **D. Go-Around**

**Acceptable Performance Guidelines:** The applicant demonstrates the ability to: complete the appropriate checklist, make radio calls as appropriate, make a timely decision to discontinue the approach to landing, apply takeoff power immediately and transition to climb pitch attitude for  $V_x$  or  $V_y$  as appropriate  $+10/-5$  knots (**Commercial:  $\pm 5$  knots**), configure the airplane after a positive rate of climb has been verified or in accordance with airplane manufacturer's instructions, maneuver to the side of the runway/landing area when necessary to clear and avoid conflicting traffic, maintain  $V_y +10/-5$  knots to a safe maneuvering altitude (**Commercial:  $\pm 5$  knots**), and maintain directional control and proper wind-drift correction throughout the climb.

**Reference:** ACS

### **E. Short-field Approach and Landing**

**Acceptable Performance Guidelines:** The applicant demonstrates the ability to: complete the appropriate checklist, make radio calls as appropriate, ensure the airplane is aligned with the correct/assigned runway, scan the landing runway and adjoining area for traffic and obstructions, consider the wind conditions, landing surface, obstructions, and select a suitable touchdown point, establish the recommended approach and landing configuration and airspeed, and adjust pitch attitude and power as required to maintain a stabilized approach, maintain manufacturer's published airspeed or in its absence not more than 1.3 VSO,  $+10/-5$  knots (**Commercial:  $\pm 5$  knots**) with gust factor applied, maintain crosswind correction and directional control throughout the approach and landing, make smooth, timely, and correct control inputs during the round out and touchdown, touch down at a proper pitch attitude within 200 feet beyond or on the specified point (**Commercial: 100 feet**), threshold markings, or runway numbers, with no side drift, minimum float, and with the airplane's longitudinal axis aligned with and over runway centerline, use manufacturer's recommended procedures for airplane configuration and braking, execute a timely go-around if the approach cannot be made within the tolerances specified above or for any other condition that may result in an unsafe approach or landing, and utilize runway incursion avoidance procedures.

**Reference:** ACS

### **D. Soft-field Approach and Landings**

**Acceptable Performance Guidelines:** The applicant demonstrates the ability to: complete the appropriate checklist, make radio calls as appropriate, ensure the airplane is aligned with the correct/assigned runway, scan the landing runway and adjoining area for traffic and obstructions, consider the wind conditions, landing surface, obstructions, and select a suitable touchdown point, establish the recommended approach and landing configuration and airspeed, and adjust pitch attitude and power as required to maintain a stabilized approach, maintain manufacturer's published airspeed or

in its absence not more than 1.3 VSO, +10/-5 knots (**Commercial: ±5 knots**) with gust factor applied, maintain crosswind correction and directional control throughout the approach and landing, make smooth, timely, and correct control inputs during the round out and touchdown, and, for tricycle gear airplanes, keep the nose wheel off the surface until loss of elevator effectiveness, touch down at a proper pitch attitude with minimum sink rate, no side drift, and with the airplane's longitudinal axis aligned with the center of the runway, maintain elevator as recommended by manufacturer during rollout and exit the "soft" area at a speed that would preclude sinking into the surface, execute a timely go-around if the approach cannot be made within the tolerances specified above or for any other condition that may result in an unsafe approach or landing, maintain proper position of the flight controls and sufficient speed to taxi while on the soft surface.

**Reference:** ACS

## **XIV. SAFETY AWARENESS**

### **A. Clearing Turns and Collision Avoidance**

**Acceptable Performance Guidelines:** The applicant shall execute clearing turns and maintain a concerted effort in avoiding other aircraft and obstacles, using all available knowledge in the cockpit.

### **B. Vigilance, Risk Mgt & Judgment**

**Acceptable Performance Guidelines:** The applicant shall continuously monitor aircraft performance, and other safety issues during the flight. The applicant shall demonstrate sound aeronautical decision-making procedures to identify hazards and mitigate risk.

### **C. Fuel Management**

**Acceptable Performance Guidelines:** The applicant shall monitor fuel usage during flight and take appropriate action if flight conditions would cause the applicant to land without CAP required fuel reserves.

### **D. Use of Resource Management**

**Acceptable Performance Guidelines:** The applicant shall coordinate and use available resources in order to accomplish his/her task. These resources may be ground, air, or piece(s) of equipment that satisfy the particular needs.

### **E. Ground Handling Procedures**

**Acceptable Performance Guidelines:** The applicant shall follow CAP guidelines for ground handling of the aircraft.

**Reference:** Ground Handling Video, CAPR 70-1

### **F. Use of Risk Management (Go-No Go)**

**Acceptable Performance Guidelines:** The applicant shall assess the risks for the flight prior to starting engine, and again before taking off. If his/her personal limits appear to be exceeded, the applicant shall discontinue the flight before taxiing or takeoff. The applicant shall continuously monitor the risks throughout the flight and weigh them against the probable outcome. Should his/her personal limits be exceeded, it is expected that the applicant will discuss the issue with the Check Pilot for the provided scenario.

**Reference:** CAP Operational Risk Management, CAPR 70-1.