

## **Mission Observer SQTR Evaluation Criteria Familiarization and Preparatory Training**

### **O-2010 USE IN-FLIGHT SERVICES**

1. Demonstrate and discuss how to use the following in-flight services:
  - a. Flight Service Stations and scheduled weather broadcasts.
  - b. Obtain an ATIS report.
  - c. HIWAS.
  - d. Obtain an AWOS and/or ASOS report.
  - e. Give a PIREP report (may be simulated).

### **O-2013 PLOT A ROUTE ON A SECTIONAL CHART**

Given a sectional chart, a plotter, and two points on the chart (e.g., two airports):

1. Plot a course between the two points.
2. Select checkpoints along the route. Discuss the reason you selected the checkpoints.
3. Calculate the time it will take an aircraft (120 knots with no wind) to fly the route.

### **O-2107 PREPARE FOR A TRIP TO A REMOTE MISSION BASE**

1. Check for proper uniform, credentials and equipment.
2. State the flight time and duty limitations per CAPR 60-1.
3. Assist in checking the aircraft:
  - a. Check for required equipment on board (e.g., tie downs, survival kit, cleaning gear).
  - b. Clean windows, as necessary.
4. Assist in filling out a CAP flight plan.
5. Receive a briefing from the mission pilot:
  - a. Fuel assumptions and fuel stop.
  - b. Airspace restrictions, NOTAMS, and destination airport diagrams.
6. Upon (simulated) arrival at mission base:
  - a. Secure the aircraft and arrange for refueling.
  - b. Sign yourself and the aircraft into the mission.
  - c. Assist in completing your "Inbound" CAPF 104.

### **P-2007 DISCUSS MISSION OBSERVER DUTIES AND RESPONSIBILITIES**

1. State the primary role of the observer, particularly when in the search area.
2. Discuss general duties and responsibilities.
3. Discuss pre-flight duties and responsibilities.
4. Discuss in-flight duties and responsibilities.
5. Discuss post-flight duties and responsibilities.
6. Discuss what should be entered into the observer log.

### **P-2008 DISCUSS THE DANGERS OF ICING**

1. Discuss the following concerning icing:
  - a. Freezing level.
  - b. How airframe frost and icing affects aircraft performance.
  - c. How carburetor icing affects aircraft performance.

### **P-2009 DISCUSS THE DANGERS OF REDUCED VISIBILITY CONDITIONS**

1. Discuss the following concerning reduced visibility conditions:
  - a. Reduced visibility conditions.
  - b. Basic reduced visibility minimums.

- c. Effects on search operations.

**P-2010 DISCUSS THE DANGERS OF WIND AND THUNDERSTORMS**

1. Discuss the effects of convection currents, particularly during landing.
2. Discuss wind patterns around high- and low-pressure areas.
3. Discuss the characteristics of cold and warm fronts.
4. Discuss the dangers of windshear.
5. Discuss the dangers of thunderstorms.

**P-2011 DISCUSS THE EFFECTS OF DENSITY ALTITUDE ON AIRCRAFT PERFORMANCE**

1. Discuss atmospheric pressure, pressure altitude and density altitude.
2. Obtain the local altimeter setting and enter it into an aircraft altimeter.
3. Discuss how high density altitude degrades aircraft performance.
4. Discuss strategies to deal with high density altitude on search operations.
5. Discuss mountainous terrain precautions and strategies.

**P-2012 IDENTIFY CONTROLLED AND SPECIAL USE AIRSPACES ON A SECTIONAL**

1. Identify (sectional) and discuss operations in and near, and identify on a sectional chart:
  - a. Controlled airport.
  - b. Prohibited airspace.
  - c. Restricted airspace.
  - d. Military Operating Area.
  - e. Military Training Routes.

## **Advanced Training**

**O-2002 DEMONSTRATE OPERATION OF THE AIRCRAFT RADIOS**

1. Set up and use the aircraft communications radio:
  - a. Power, volume and squelch controls.
  - b. 50 and 25 kilocycles frequency adjustments.
  - c. Set in primary and standby frequencies, and switch between them (flip-flop).
  - d. Discuss proper use of CAP callsigns, including when to use "rescue".
  - e. Discuss stuck mike indications and strategies.
2. Set up and use the CAP VHF FM radio:
  - a. Power, volume and squelch controls.
  - b. Select assigned frequencies (main and guard channels).
  - c. Keypad controls (scroll and scan).
  - d. Give required mission FM radio reports (may be simulated).

**O-2011 OPERATE THE VOR AND DME**

1. Use (or discuss) the ADF to determine approximate position.
2. Determine aircraft position with the VOR, and discuss how to use the VOR to fly to/from a station. Also determine position by cross-radials.
3. Determine aircraft position with the DME, and discuss the limitations of DME.
4. Discuss the limitations of each navaid.

**O-2012 OPERATE THE GLOBAL POSITIONING SYSTEM**

1. Using the operator's manual, discuss the operation of the GPS.

2. Using the operator's manual, display information provided by the GPS:
  - a. Altitude.
  - b. Ground speed.
  - c. Heading to waypoint and current heading.
  - d. Track over ground (ground track).
  - e. Estimated time to the waypoint (ETE).
3. Using the operator's manual, determine current position using:
  - a. Bearing and distance to waypoints.
  - b. Present position (lat/long coordinates).
  - c. Moving map display (if applicable).
4. Using the operator's manual, enter a destination waypoint:
  - a. Airport.
  - b. VOR.
  - c. User-defined (lat/long coordinates).
5. Using the operator's manual, display "nearest airport" and "nearest VOR."

#### **O-2108 ASSIST IN ELT SEARCHES**

1. Assist in locating a practice beacon using the following search methods:
  - a. Homing to a non-reflected signal.
  - b. Homing to a non-reflected signal at night (combine with 1.d, if possible).
  - c. Homing to a reflected signal.
  - d. Wing null to a non-reflected signal (one during the day and one at night).
2. Assist in locating a practice beacon using the following search methods (may be simulated):
  - a. Aural.
  - b. Signal.
3. Discuss night and IFR searches, with particular emphasis on the hazards and precautions.
4. Discuss signal reflection and interference.

#### **O-2109 ASSIST IN PLANNING AND PERFORMING A ROUTE SEARCH**

#### **O-2110 ASSIST IN PLANNING AND PERFORMING A PARALLEL TRACK SEARCH**

#### **O-2115 ASSIST IN PLANNING AND PERFORMING A CREEPING LINE SEARCH 1.**

#### **O-2112 ASSIST IN PLANNING AND PERFORMING A POINT-BASED SEARCH**

1. Sign into the mission.
2. Receive a sortie briefing, asking questions as necessary.

#### **ROUTE SEARCH**

3. Assist in planning a route search from Point A to B and back. Include:
  - a. Position coordinates for the route (lat/long and VOR radials/cross-radials).
  - b. Altitude restrictions, obstacles and other hazards (e.g., MTRs and SUAs).
  - c. Scanner assignments (discuss as necessary).

#### **PARALLEL TRACK SEARCH**

3. Assist in planning a one-quarter grid search. Include:
  - a. Estimated time enroute, time in the search area, and fuel requirements.
  - b. Position coordinates for the entry and exit points (lat/long & VOR radials/cross-radials).
  - c. Position coordinates for the legs (lat/long and VOR radials/cross-radials).
  - d. Altitude restrictions, obstacles and other hazards (e.g., MTRs and SUAs).

- e. Discuss observer/scanner assignments for all possible combinations.

### **CREEPING LINE SEARCH**

3. Assist in planning a creeping line search. Include:
  - a. Estimated time enroute, time in the search area, and fuel requirements.
  - b. Position coordinates for the entry and exit points (lat/long & VOR radials/cross-radials).
  - c. Position coordinates for the legs (lat/long and VOR radials/cross-radials).
  - d. Altitude restrictions, obstacles and other hazards (e.g., MTRs and SUAs).
  - e. Discuss observer/scanner assignments for all possible combinations.

### **POINT-BASED SEARCH**

3. Assist in planning a point-based search (expanding square or sector). Include:
  - a. Estimated time enroute, time in the search area, and fuel requirements.
  - b. Position coordinates for the entry and exit points (lat/long & VOR radials/cross-radials).
  - c. Position coordinates for the legs (lat/long and VOR radials/cross-radials).
  - d. Altitude restrictions, obstacles and other hazards (e.g., MTRs and SUAs).
  - e. Discuss observer/scanner assignments for all possible combinations.
4. Assist in filling out the flight plan and preliminary mission data on the CAPF 104.
5. Receive pilot safety and mission briefings, asking questions as necessary.
6. Demonstrate and discuss safety during each critical phase of the flight. In particular, demonstrate collision avoidance and enforce sterile cockpit rules.
7. Demonstrate proper ATC communications.
8. Setup the CAP FM radio and perform all required radio reports (may be simulated).
9. Perform the point-based search (expanding square or sector). Demonstrate:
  - a. Proper use of nav aids (GPS as primary; VOR as backup).
  - b. Proper use of radios (ATC as required, and CAP FM radio reports).
  - c. Proper scanner assignment (may be simulated).
  - d. Ability to spot the search target (if applicable).
10. Demonstrate proper attention to fuel management.
11. Ensure the aircraft is secured at the end of the sortie (ready for next sortie).
12. Assist in filling out the remainder of the CAPF 104 and debrief the sortie.

**Mission Observer SQTR Evaluation Criteria  
Familiarization and Preparatory Training  
Quiz**

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2. State the flight time and duty limitations per CAPR 60-1.

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  - a. What is the standard required equipment on board?

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- b. Why should you clean the windows.

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4. Assist in filling out a CAP flight plan.
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Operations:

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Operations:

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c. Restricted airspace. Identify \_\_\_\_\_ Lat/Long \_\_\_\_\_

Operations:

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d. Military Operating Area. Identify \_\_\_\_\_ Lat/Long \_\_\_\_\_

Operations:

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e. Military Training Routes. Identify \_\_\_\_\_ Lat/Long \_\_\_\_\_

Operations:

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