

FMFA Instrument Test (eff 01/21/2024)

Pilot _____ Date _____ Corrected by _____

Complete this open book test using the FAR/AIM/POH/FMFA documents, as appropriate. Assume you are operating an FMFA aircraft. Your flight instructor will grade the test. Minimum passing score is 80%. The completed test will be filed in the pilot's file and the date will be entered into the FMFA scheduling and dispatch system.

1. No pilot may act as pilot-in-command of an aircraft, under IFR or in weather conditions less than the minimums prescribed for VFR unless that pilot has, within the preceding 6 calendar months, completed at least (FAR 61.57)
 - a. Six instrument approaches, holding procedures, intercepting and tracking courses using navigational systems, or passed an instrument proficiency check (IPC).
 - b. Six hours PIC under actual IFR conditions.
 - c. Three instrument approaches and logged 3 hours.
2. Before beginning any flight under IFR, the pilot in command must become familiar with all available information concerning that flight including (FAR 91.103):
 - a. The runway usable lengths and ensure adequate takeoff and landing performance at all airports of intended use.
 - b. Relevant instrument approaches at the destination, alternate, and other airports of intended use.
 - c. Both of the above.
3. What are the minimum fuel requirements in IFR conditions, if the first airport of intended landing is forecast to have a 1,500 foot ceiling and 3 miles visibility at flight-planned ETA? [OPS Manual 2-9.4] Fuel to fly to the first airport of intended landing and then
 - a. fly to the alternate, and fly visual or instrument approach as appropriate, and land with sufficient fuel remaining in the tanks to fly for one hour of normal cruising power.
 - b. fly to the alternate, and fly thereafter for 30 minutes at normal cruising power.
 - c. fly to the alternate, and fly thereafter for 45 minutes at normal cruising power.
4. What are the minimum qualifications for a person who occupies the other control seat as safety pilot during simulated instrument flight in VFR conditions in club aircraft? (FAR 91.109)
 - a. Private pilot with instrument rating.
 - b. Private pilot with appropriate category, class, and instrument ratings.
 - c. Private pilot certificate with appropriate category and class ratings for the aircraft and a current medical or BasicMed certificate.
5. Which checks and inspections of flight instruments or instrument systems must be accomplished before an aircraft can be flown under IFR?
 - a. VOR within 30 days if VOR/LOC/ILS will be utilized, altimeter systems within 24 calendar months, transponder within 24 calendar months, GPS database current if GPS to be utilized.
 - b. ELT test within 30 days, altimeter systems within 36 calendar months, and transponder within 24 calendar months.
 - c. VOR within 24 calendar months, transponder within 36 calendar months, and altimeter system within 12 calendar months.
6. How is your flight plan closed when your destination airport has IFR conditions and there is no control tower or flight service station (FSS) on the field?
 - a. The ARTCC controller will close your flight plan when you report the runway in sight.
 - b. Upon landing, you must close your flight plan by radio or by telephone to any FSS or ATC facility.
 - c. You may close your flight plan any time after starting the approach by contacting any FSS or ATC facility.
7. To obtain an IFR clearance for departure from FME, the pilot must, after filing an IFR flight plan with FSS or online,
 - a. Contact POTOMAC TRACON via telephone at (540)349-7579 or toll-free (866)429-5882 .
 - b. Squawk 1200 and contact POTOMAC TRACON on 133.75, 126.75, or 119.0 MHz once airborne.
 - c. Squawk 1200 and contact Potomac Approach on 119.7 or 128.7 MHz.
8. What minimum weather conditions must be forecast for your ETA at an alternate airport that has only a VOR approach with standard alternate minimums, for the airport to be listed as an alternate on the IFR flight plan? (91.169)
_____ foot ceiling and _____ statute miles visibility.
9. If a pilot elects to proceed to the selected alternate, the landing minimums used at that airport should be
 - a. Minimums specified for the approach procedure selected.
 - b. Alternate minimums shown on the approach chart.
 - c. Minimums shown for the airport in a separate listing of "IFR Alternate Minimums".
10. Fair weather cumulus clouds often indicate
 - a. Turbulence at and below the cloud bases.
 - b. Poor visibility below the cloud bases.
 - c. No turbulence below the cloud bases.
 - d. No turbulence above the cloud bases.
11. If the air temperature is +8 °C at an elevation of 1,350 feet and a standard (average) temperature lapse rate exists, the approximate freezing level will be _____ feet MSL.

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12. BWI Airport (7NM from Tipton) AWOS/ATIS can be obtained from: (1) 410- 691-1278; (2) 127.8 MHz; (3) 115.1 MHz.
 - a. True
 - b. False
13. The taxiways in vicinity of Base Ops Building at Tipton Airport (FME) are approximately 7NM from BAL VOR/DME on the 233 degree radial and are a convenient location to perform a *dual* VOR check per FAR91.171(c), but not a *single* VOR check.
 - a. True
 - b. False
14. What is an operational consideration if you fly into rain which freezes on impact?
 - a. You have flown into an area of thunderstorms.
 - b. Temperatures are above freezing at some higher altitude.
 - c. You have flown through a cold front.
15. If you fly into severe turbulence, which flight condition should you attempt to maintain?
 - a. Constant airspeed (Va).
 - b. Constant altitude and constant airspeed.
 - c. Level flight attitude.
16. What significant sky condition is reported in this METAR observation?
METAR KLAX 140651Z AUTO 00000KT 1SM R35L/4500V6000FT -RA BR BKN003 10/10 A2990 RMK AO2
 - a. Runway 35L ceiling is 6000 feet.
 - b. Ceiling is 300 feet.
 - c. Sky is obscured with runway visibility of 3500 feet.
17. If both a MEA and a MOCA are delineated for a particular route or route segment, a person may operate an aircraft below the MEA down to, but not below, the MOCA, when within _____ nautical miles of the Fix concerned (based on the pilot's reasonable estimate of that distance).
18. When departing an airport in Class G airspace, you will receive your IFR clearance from FSS or TRACON by radio or telephone. It will normally contain a "clearance void" time, in which case you must be airborne prior to that time. If a clearance void time is not given, you should request it.
 - a. True.
 - b. False.
19. Who is responsible for determining that the ELT, pitot static / altimeter system, transponder, VOR (if VOR/LOC/ILS to be used), 100 hour, and annual inspections have been complied with and the GPS data base (if to be used) is current for a particular IFR flight?
 - a. Owner.
 - b. PIC.
 - c. Operator.
20. How should you preflight check the altimeter prior to an IFR flight?
 - a. Set the altimeter first with 29.92" Hg and then the current altimeter setting. The change in altitude should correspond to the change in setting.
 - b. Set the altimeter to the current altimeter setting. The indication should be within 75 feet of the airfield elevation.
 - c. Set the altimeter to 29.92" Hg, determining the true altitude to compare with the field elevation.
21. If a VOR frequency is underlined on an approach procedure it signifies:
 - a. DME information is available.
 - b. No voice capability is available on the VOR frequency.
 - c. Weather information is transmitted on this frequency at 10 and 50 minutes past the hour.
22. The FSS may be reached by transmitting on _____ MHZ while listening on the _____ frequency appropriate for your aircraft's location if "122.1R" appears above the VOR's identification box on an enroute low altitude chart.
23. What is the definition of MEA?
 - a. The lowest published altitude which meets obstacle clearance requirements and assures acceptable navigational signal coverage.
 - b. An altitude which meets obstacle clearance requirements, assures acceptable navigation signal coverage, two way radio communications, adequate radar coverage, and accurate DME mileage.
 - c. The lowest published altitude which meets obstacle requirements, assures acceptable navigational signal coverage, two way radio communications, and provides adequate radar coverage.
24. Which three basic instruments are pitot-static system dependent? _____.
25. If during a VFR practice instrument approach, ATC assigns an altitude or heading that will cause you to enter the clouds, what action should be taken?
 - a. Enter the clouds, since you are on an ATC clearance.
 - b. Avoid the clouds and inform ATC that altitude/heading will not permit VFR.
 - c. Declare an emergency and enter the clouds.