

PRACTICE EXAM 22 (60 QUESTIONS)

1. What is the exact interval within which a VOR equipment check must be completed for IFR navigation?

- A. The preceding 24 calendar months
- B. The preceding 12 calendar months
- C. The preceding 6 calendar months
- D. The preceding 30 days

2. Which minimum altitude guarantees obstacle clearance AND acceptable navigation signal reception along the entire airway segment?

- A. The minimum obstruction clearance altitude (MOCA)
- B. The minimum enroute altitude (MEA)
- C. The minimum reception altitude (MRA)
- D. The minimum crossing altitude (MCA)

3. What is the standard service interval for the altimeter and static pressure system inspection required for IFR flight?

- A. Every 12 calendar months
- B. Every 24 calendar months
- C. Every 30 days
- D. Every 100 hours

4. Instrument currency requires six approaches, holding, and intercepting and tracking courses within what period?

- A. The preceding 30 days
- B. The preceding 12 calendar months
- C. The preceding 3 calendar months
- D. The preceding 6 calendar months

5. What transponder code indicates a two-way radio communication failure?

- A. 7600
- B. 7700
- C. 7500
- D. 1200

6. Which AIRMET designation specifically covers IFR conditions and mountain obscuration?

- A. Sierra
- B. Tango
- C. Zulu
- D. Yankee

7. What is the minimum flight visibility, expressed as the standard alternate minimum, that an alternate with a precision approach must forecast?

- A. 1 statute mile
- B. 3 statute miles
- C. 1/2 statute mile
- D. 2 statute miles

8. A Decision Altitude (DA) is associated with which type of approach?

A. A VOR non-precision approach

B. An NDB approach

C. A localizer-only approach

D. A precision or vertically guided approach such as ILS or LPV

9. What is the standard climb gradient assumed for an instrument departure procedure unless a higher value is published?

A. 150 feet per nautical mile

B. 250 feet per nautical mile

C. 200 feet per nautical mile

D. 300 feet per nautical mile

10. Which report is required to ATC at all times, even when in radar contact?

A. Reaching a compulsory reporting point

B. A revised estimate of three minutes for the next fix

C. Crossing the midpoint between two VORs

D. A change in average true airspeed of 10 knots or 5 percent from filed

11. What is the maximum holding airspeed for a typical civil aircraft at altitudes from 6,001 through 14,000 feet MSL?

A. 175 knots

B. 230 knots

C. 265 knots

D. 200 knots

12. What is the standard inbound holding leg timing at or below 14,000 feet MSL?

- A. 1.5 minutes
- B. 2 minutes
- C. 1 minute
- D. 45 seconds

13. Which minimum altitude defines the lowest altitude at which an intersection can be reliably determined?

- A. The minimum enroute altitude (MEA)
- B. The minimum crossing altitude (MCA)
- C. The maximum authorized altitude (MAA)
- D. The minimum reception altitude (MRA)

14. At and above what altitude must all aircraft set the standard altimeter setting of 29.92 inches Hg?

- A. 14,500 feet MSL
- B. 18,000 feet MSL
- C. 24,000 feet MSL
- D. 10,000 feet MSL

15. What is the minimum passing score on the FAA Instrument Rating – Airplane knowledge test?

- A. 75 percent
- B. 70 percent
- C. 80 percent
- D. 65 percent

16. How many satellites must an IFR GPS receiver use for RAIM to detect a faulty signal (without baro-aiding)?

- A. Three
- B. Four
- C. Six
- D. Five

17. What is the obstacle clearance an IFR aircraft must maintain in a non-mountainous area with no published minimum altitude?

- A. 1,000 feet above the highest obstacle within 4 NM of the course
- B. 500 feet above the highest obstacle within 4 NM
- C. 2,000 feet above the highest obstacle within 4 NM
- D. 1,000 feet above the highest obstacle within 2 NM

18. A standard-rate turn is defined as how many degrees per second?

- A. 1.5 degrees per second
- B. 6 degrees per second
- C. 3 degrees per second
- D. 2 degrees per second

19. Which document standard is current for the Instrument Rating – Airplane in 2026?

- A. FAA-S-8081-4 (the legacy PTS)
- B. FAA-S-ACS-8C
- C. FAA-S-ACS-8A
- D. FAA-G-8082-13

20. An alternate airport with only a non-precision approach must forecast what standard alternate minimums?

- A. 600 feet and 2 statute miles
- B. 1,000 feet and 3 statute miles
- C. 800 feet and 2 statute miles
- D. 400 feet and 1 statute mile

21. Which gyroscopic property drives the turn coordinator?

- A. Rigidity in space
- B. Magnetic dip
- C. Centrifugal force
- D. Precession

22. What is the obstacle clearance required in a designated mountainous area with no published minimum IFR altitude?

- A. 1,000 feet above the highest obstacle within 4 NM
- B. 2,000 feet above the highest obstacle within 4 NM of the course
- C. 1,000 feet above the highest obstacle within 2 NM
- D. 500 feet above the highest obstacle within 4 NM

23. How long is an instrument knowledge test result valid for the purpose of taking the practical test?

- A. 12 calendar months
- B. 6 calendar months
- C. 24 calendar months
- D. It does not expire

24. Which AIRMET designation covers turbulence and strong surface winds?

- A. Sierra
- B. Zulu
- C. Yankee
- D. Tango

25. What does the "T" in the CRAFT clearance mnemonic represent?

- A. True airspeed
- B. Transponder (squawk) code
- C. Time of release
- D. Type of approach

26. The 1-2-3 rule requires an alternate unless the destination forecast shows what conditions for the window from 1 hour before to 1 hour after ETA?

- A. Ceiling at least 2,000 feet and visibility at least 3 statute miles
- B. Ceiling at least 1,000 feet and visibility at least 3 statute miles
- C. Ceiling at least 3,000 feet and visibility at least 5 statute miles
- D. Ceiling at least 1,500 feet and visibility at least 2 statute miles

27. A localizer provides which type of guidance?

- A. Lateral guidance aligned with the runway centerline
- B. Vertical guidance along a glide path
- C. Both lateral and vertical guidance
- D. Distance information only

28. Which instrument is the only one that operates using ram (pitot) pressure?

- A. The altimeter
- B. The airspeed indicator
- C. The vertical speed indicator
- D. The heading indicator

29. What is the IFR fuel reserve requirement after reaching the destination and any required alternate?

- A. 45 minutes at normal cruising speed
- B. 30 minutes at normal cruising speed
- C. 60 minutes at holding speed
- D. 20 minutes at maximum endurance

30. Which approach lighting reference, under 14 CFR 91.175, permits descent only to 100 feet above touchdown zone elevation unless additional references are seen?

- A. The approach light system
- B. The runway threshold
- C. The touchdown zone markings
- D. The visual approach slope indicator

31. A SID is best described as a departure procedure that primarily serves what purpose?

- A. Obstacle clearance flown without ATC assignment
- B. A course reversal onto the final approach
- C. Air traffic flow management, always assigned by ATC
- D. A holding pattern for departing traffic

32. What does DME measure?

- A. The ground distance to the station
- B. The slant-range distance to the station
- C. The bearing to the station
- D. The altitude above the station

33. Which memory aid lists the equipment required for IFR flight in addition to VFR-required instruments?

- A. ATOMATOF LAMES
- B. GRABCARD
- C. AVIATES
- D. IMSAFE

34. A Minimum Descent Altitude (MDA) is used on which type of approach?

- A. A non-precision approach
- B. A precision ILS approach
- C. An LPV approach
- D. An LNAV/VNAV approach

35. What does the standard inbound holding leg timing become above 14,000 feet MSL?

- A. 1 minute
- B. 2 minutes
- C. 1.5 minutes
- D. 45 seconds

36. Which approach category corresponds to an approach speed of 91 up to but not including 121 knots?

- A. Category A
- B. Category C
- C. Category D
- D. Category B

37. What is the lost-communication altitude rule for each route segment under 14 CFR 91.185?

- A. The lowest of assigned, minimum, or expected altitude
- B. The highest of assigned, minimum IFR, or expected altitude
- C. The minimum IFR altitude only
- D. The last assigned altitude only

38. A Victor airway has what standard width?

- A. 8 nautical miles, 4 NM either side of centerline
- B. 10 nautical miles, 5 NM either side
- C. 4 nautical miles, 2 NM either side
- D. 16 nautical miles, 8 NM either side

39. What does the WAAS augmentation enable that basic GPS cannot?

- A. Vertically guided approaches to LPV minimums
- B. Navigation without any onboard receiver
- C. Elimination of the navigation database
- D. Use only above 18,000 feet

40. Which inspection interval applies to the transponder for IFR and ATC operations?

- A. Every 30 days
- B. Every 12 calendar months
- C. Every 100 hours
- D. Every 24 calendar months

41. What is the standard Category I ILS decision height above the touchdown zone?

- A. 100 feet
- B. 200 feet
- C. 250 feet
- D. 300 feet

42. Which hazardous attitude is countered by the antidote "Follow the rules; they are usually right"?

- A. Anti-authority
- B. Impulsivity
- C. Macho
- D. Resignation

43. What does a magnetic compass require to operate?

- A. An engine-driven vacuum pump
- B. The aircraft's electrical system
- C. No external power; it aligns with Earth's magnetic field
- D. The pitot-static system

44. Which AIRMET designation covers icing and freezing levels?

- A. Sierra
- B. Tango
- C. Zulu
- D. Yankee

45. What is required to regain instrument privileges after currency has lapsed beyond the grace period?

- A. An instrument proficiency check (IPC)
- B. A flight review only
- C. Six approaches with an instructor
- D. A new written knowledge test

46. A clearance issued "cleared as filed" does NOT automatically include which element?

- A. The route as submitted
- B. The departure airport
- C. The aircraft call sign
- D. The assigned altitude, which ATC states separately

47. What does a full-scale CDI deflection on a VOR represent in degrees of course error?

- A. 10 degrees
- B. 5 degrees
- C. 2 degrees
- D. 20 degrees

48. On an RNAV (GPS) approach, which line of minimums provides the lowest minimums and requires WAAS?

- A. LNAV
- B. LP
- C. LPV
- D. Circling

49. Which scan error involves staring at a single instrument while neglecting the others?

- A. Omission
- B. Emphasis
- C. Fixation
- D. Inversion

50. Around a high-pressure system in the Northern Hemisphere, the surface wind flows in what manner?

- A. Counterclockwise and inward, with rising air
- B. Clockwise and outward, with descending air
- C. Counterclockwise and outward, with stable air
- D. Clockwise and inward, with precipitation

51. Which front typically produces widespread, layered clouds and steady precipitation over a large area ahead of it?

- A. A cold front
- B. An occluded front
- C. A dry line
- D. A warm front

52. What is the maximum permissible bearing error in a VOR ground checkpoint check for IFR use?

- A. ± 2 degrees
- B. ± 6 degrees
- C. ± 10 degrees
- D. ± 4 degrees

53. A holding pattern in lieu of a procedure turn is abbreviated how on approach charts?

- A. NoPT
- B. EFC
- C. HILPT
- D. VDP

54. What does an aft center-of-gravity condition do to longitudinal stability?

- A. It reduces stability, making unusual-attitude recovery more difficult
- B. It increases stability and raises stall speed
- C. It has no effect on stability
- D. It eliminates the need for trim

55. Which instrument category in the control and performance method includes the attitude indicator and power indicator?

- A. Performance instruments
- B. Control instruments
- C. Navigation instruments
- D. Supporting instruments

56. What does a vertical visibility report "VV004" indicate?

- A. A cloud layer at 4,000 feet
- B. A visibility of 4 statute miles
- C. A vertical visibility of 400 feet into an obscuration
- D. A variable wind at 4 knots

57. What is the immediate transponder action upon a two-way communication failure, before applying the route and altitude rules?

- A. Squawk 1200 and continue
- B. Squawk 7700 and descend
- C. Squawk 7600 and attempt to restore communication
- D. Squawk 0000 to indicate IFR

58. What does a Maltese cross symbol on the profile view of an approach chart identify?

- A. The final approach fix
- B. The missed approach point
- C. The visual descent point
- D. The decision altitude

59. Which property explains why DME error is greatest directly over the station at high altitude?

- A. The signal weakens overhead
- B. The slant range equals the altitude when ground distance is near zero
- C. The receiver loses lock overhead
- D. The bearing reverses overhead

60. What is the primary purpose of an Obstacle Departure Procedure (ODP)?

- A. To manage air traffic flow in busy airspace
- B. To provide a course reversal onto the approach
- C. To provide obstacle clearance for departing aircraft
- D. To define the enroute cruising altitude

+ Answer Key

1. D — A VOR equipment check for IFR navigation must be completed within the preceding 30 days, with the date, place, bearing error, and signature recorded. This is the inspection most specific to IFR VOR use and is counted in actual days.
2. B — The minimum enroute altitude (MEA) guarantees both obstacle clearance and acceptable navigation signal reception along the entire segment. This dual guarantee distinguishes it from the MOCA.
3. B — The altimeter and static pressure system inspection for IFR flight is required every 24 calendar months. It is a biennial calendar-month inspection under the AVIATES grouping.
4. D — Instrument currency requires six approaches, holding, and intercepting and tracking courses within the preceding 6 calendar months. This is the baseline recency that keeps instrument privileges active.
5. A — A two-way radio communication failure is indicated by squawking 7600. (7500 indicates hijacking and 7700 a general emergency.) The code alerts ATC to protect airspace for the lost-comm aircraft.
6. A — AIRMET Sierra covers IFR conditions and mountain obscuration. The companion AIRMETs are Tango (turbulence) and Zulu (icing/freezing levels).
7. D — The standard alternate minimum visibility for an airport with a precision approach is 2 statute miles, paired with a 600-foot ceiling ("600-2"). The forecast at ETA must meet these values for the alternate to qualify.

8. D — A Decision Altitude is associated with a precision or vertically guided approach such as an ILS or LPV. Non-precision approaches (VOR, LOC, NDB) use a Minimum Descent Altitude instead.

9. C — The standard departure climb gradient assumed for obstacle clearance is 200 feet per nautical mile unless a higher value is published. Departures also assume a climb to 400 feet above the runway end before turning.

10. D — A change in average true airspeed of 10 knots or 5 percent from the filed value must be reported at all times, even in radar contact. Reporting-point crossings and revised estimates apply only outside radar contact.

11. D — From 6,001 through 14,000 feet MSL, the maximum holding airspeed for a typical civil aircraft is 200 knots indicated. Holding speed limits keep the pattern within protected airspace.

12. C — Standard inbound holding leg timing at or below 14,000 feet MSL is 1 minute. Above 14,000 feet it increases to 1.5 minutes.

13. D — The minimum reception altitude (MRA) is the lowest altitude at which an intersection can be reliably determined from the navigation signals. It applies where the signal defining a fix is unusable below a certain altitude.

14. B — At and above 18,000 feet MSL (Class A), all aircraft set the standard altimeter setting of 29.92 inches Hg. This places all high-altitude traffic on common pressure altitude/flight levels.

15. B — The minimum passing score on the IRA knowledge test is 70 percent (42 of 60 correct). This is the standard FAA airman knowledge test threshold.

16. D — Without baro-aiding, RAIM requires five satellites to detect a faulty signal, one more than the four needed for a position fix. The extra satellite provides the redundancy to identify an inconsistent signal.

17. A — In a non-mountainous area with no published minimum, the IFR aircraft must maintain 1,000 feet above the highest obstacle within 4 NM of the course. This guarantees terrain and obstacle clearance enroute.

18. C — A standard-rate turn is 3 degrees per second, completing a 360° turn in two minutes. It is the benchmark for instrument maneuvering and timed turns.

19. B — FAA-S-ACS-8C is the current Instrument Rating – Airplane standard for 2026. It superseded earlier ACS editions and the legacy PTS.

20. C — An alternate with only a non-precision approach must forecast an 800-foot ceiling and 2 statute miles visibility ("800-2"). A precision approach lowers this to 600-2.

21. D — Precession drives the turn coordinator, translating the rate of turn into a proportional deflection. Rigidity in space, by contrast, drives the attitude and heading indicators.

22. B — In a designated mountainous area with no published minimum, the requirement is 2,000 feet above the highest obstacle within 4 NM of the course. The larger margin accounts for rugged terrain and downdrafts.

23. C — An instrument knowledge test result is valid for 24 calendar months for the purpose of taking the practical test. The checkride must occur within that window.

24. D — AIRMET Tango covers turbulence and strong surface winds. Sierra covers IFR/mountain obscuration and Zulu covers icing.

25. B — In the CRAFT mnemonic, "T" is the transponder (squawk) code. The full sequence is Clearance limit, Route, Altitude, Frequency, Transponder code.

26. A — The 1-2-3 rule requires an alternate unless the destination forecast shows at least a 2,000-foot ceiling and 3 statute miles visibility for the window. Both conditions must be met to skip the alternate.

27. A — A localizer provides lateral guidance aligned with the runway centerline. The glide slope, a separate component, provides vertical guidance.

28. B — The airspeed indicator is the only instrument that operates using ram (pitot) pressure, comparing it against static pressure. The altimeter and VSI use static pressure alone.

29. A — The IFR fuel reserve after destination and any required alternate is 45 minutes at normal cruising speed. This exceeds the 30-minute VFR day reserve, reflecting greater IFR uncertainty.

30. A — The approach light system permits descent only to 100 feet above touchdown zone elevation under 91.175, unless the red terminating or side row bars are seen. Other listed references allow descent to land when the visibility and position requirements are met.

31. C — A SID primarily serves air traffic flow management and is always assigned by ATC, though it may also provide obstacle clearance. An ODP, by contrast, exists for obstacle clearance and may be flown without assignment.

32. B — DME measures the slant-range distance to the station—the straight-line distance—not the ground distance. The error is greatest close to the station at high altitude.

33. B — GRABCARD lists the equipment required for IFR flight in addition to the VFR-required instruments. ATOMATOF LAMES covers day VFR, and AVIATES covers inspections.

34. A — A Minimum Descent Altitude is used on a non-precision approach, which provides lateral guidance only. Precision and vertically guided approaches use a Decision Altitude.

35. C — Standard inbound holding leg timing above 14,000 feet MSL is 1.5 minutes. The longer leg reflects the higher true airspeeds flown at altitude.

36. D — Category B corresponds to an approach speed of 91 up to but not including 121 knots. Category A is below 91, C is 121–140, and D is 141–165.

37. B — Under 91.185, the lost-comm altitude for each segment is the highest of the assigned, minimum IFR, or expected altitude. Choosing the highest applicable value ensures obstacle clearance throughout.

38. A — A standard Victor airway is 8 nautical miles wide—4 NM either side of the centerline. Tracking the centerline keeps the aircraft within this protected airspace.

39. A — WAAS augments GPS to provide the accuracy and integrity for vertically guided approaches to LPV minimums. Basic GPS lacks the integrity needed for vertical guidance.

40. D — The transponder inspection for IFR and ATC operations is required every 24 calendar months, the same interval as the altimeter/static check. Both are biennial inspections.

41. B — A standard Category I ILS provides a decision height of about 200 feet above the touchdown zone. Lower minimums (Cat II/III) require additional equipment, training, and authorization.

42. A — "Follow the rules; they are usually right" is the antidote to the anti-authority hazardous attitude. Recognizing the attitude allows the pilot to apply its specific antidote.

43. C — The magnetic compass requires no external power; it operates by a magnetized element aligning with Earth's magnetic field. This self-contained operation makes it the ultimate backup heading reference.

44. C — AIRMET Zulu covers icing and freezing levels. Sierra covers IFR/mountain obscuration and Tango covers turbulence.

45. A — After currency has lapsed beyond the grace period, an instrument proficiency check (IPC) is required to regain instrument privileges. The pilot can no longer self-certify currency beyond that window.

46. D — "Cleared as filed" means the route matches the filing, but the assigned altitude is always stated separately because the filed altitude is a request. The pilot reads back the assigned and expected altitudes.

47. A — A full-scale CDI deflection on a VOR represents approximately 10 degrees of course error. This coarse sensitivity contrasts with the much more sensitive localizer.
48. C — LPV typically provides the lowest minimums on an RNAV (GPS) chart, approaching ILS precision, and requires WAAS. LNAV and LP are lateral-only with higher minimums.
49. C — Fixation is the scan error of staring at a single instrument while neglecting the others. It destroys the integrated cross-check and can allow an undetected problem to develop.
50. B — Around a Northern Hemisphere high, surface wind flows clockwise and outward, with descending air and generally fair weather. A low, by contrast, has counterclockwise, inward flow with rising air.
51. D — A warm front typically produces widespread, layered (stratiform) clouds and steady precipitation over a large area ahead of it. The gentle lifting of stable air creates this broad, prolonged weather.
52. D — The maximum permissible bearing error in a VOR ground checkpoint check for IFR use is ± 4 degrees. This tolerance confirms the receiver is accurate enough for IFR navigation.
53. C — A holding pattern in lieu of a procedure turn is abbreviated HILPT on approach charts. It uses a charted holding pattern to accomplish the course reversal.
54. A — An aft CG reduces longitudinal stability, making recovery from a stall or unusual attitude more difficult—especially hazardous in IMC. A forward CG increases stability but raises stall speed.
55. B — In the control and performance method, the control instruments include the attitude indicator and the power indicator, which the pilot directly commands. The performance instruments reflect the resulting aircraft state.
56. C — "VV004" indicates a vertical visibility of 400 feet into an indefinite ceiling or obscuration. It is reported when the sky is obscured and no discrete layer can be measured.

57. C — The immediate action on a two-way communication failure is to squawk 7600 and attempt to restore communication, before applying the route and altitude rules. Troubleshooting may resolve the problem before further procedures are needed.

58. A — The Maltese cross on the profile view identifies the final approach fix (FAF) on a non-precision approach. It marks where the final descent to the MDA begins.

59. B — DME error is greatest directly over the station at high altitude because the slant range then equals the altitude while the ground distance approaches zero. Overhead at 6,000 feet, the DME reads about 1 NM though the ground distance is nil.

60. C — The primary purpose of an Obstacle Departure Procedure is to provide obstacle clearance for departing aircraft. It may be flown at the pilot's discretion without specific ATC assignment, unlike a SID.