PRACTICE EXAM 34 SIMULATION

1. To act as PIC under IFR, a pilot must hold an instrument rating and be current per:

A. 61.57

B. 91.205

C. 91.171

D. 61.65

2. The transponder must be tested and inspected within the preceding:

A. 12 calendar months

B. 6 months

C. 24 calendar months

D. 30 days

3. A blocked pitot tube with the drain hole open causes the airspeed indicator to:

A. Drop toward zero

B. Read high in a climb

C. Behave like an altimeter

D. Freeze

4. A vacuum failure in a traditional panel disables the:

A. Attitude indicator and heading indicator

B. Altimeter and airspeed indicator

C. Turn coordinator

D. Magnetic compass

5. A wing stalls when it exceeds its:

A. Maximum airspeed

B. Service ceiling

C. Critical angle of attack

D. Maximum weight

6. A standard-rate turn changes heading at:

A. 1 degree per second

B. 3 degrees per second

C. 6 degrees per second

D. 1.5 degrees per second

7. A small temperature-dew point spread suggests:

A. Clear skies

B. High winds

C. Possible fog or low clouds

D. Thunderstorms

8. A METAR "OVC005" means overcast at:

A. 5,000 feet

B. 50 feet

C. 5 feet

D. 500 feet

9. AIRMET Zulu addresses:

A. Icing and freezing levels

B. Turbulence

C. IFR conditions

D. Strong winds

10. A VOR radial is measured:

A. Toward the station

B. Relative to the nose

C. From the station

D. From true north

11. An LPV approach is flown to a:

A. Minimum descent altitude

B. Circling altitude

C. Maximum altitude

D. Decision altitude

12. A standard holding pattern uses:

A. Right turns

B. Left turns

C. Alternating turns

D. No turns

13. At or below 14,000 feet MSL, the inbound holding leg is timed for:

A. 30 seconds

B. 1 minute

C. 90 seconds

D. 2 minutes

14. An ODP provides:

A. Traffic sequencing

B. A simplified clearance

C. Noise abatement

D. Obstacle clearance on departure

15. The MEA guarantees obstacle clearance and:

A. Radar coverage

B. Navigation signal

C. A direct route

D. The lowest fuel burn

16. On a magnetic course of 090 below 18,000 feet, the IFR cruising altitude is:

A. Odd thousands

B. Even thousands

C. Even thousands plus 500

D. Odd thousands plus 500

17. The FAF on a non-precision approach profile is marked by a:

A. Lightning bolt

B. Holding racetrack

C. Maltese cross

D. Solid triangle

18. On a non-precision approach, the pilot descends to but not below the:

A. Minimum Descent Altitude

B. Decision altitude

C. Glide slope intercept

D. Circling radius

19. To descend below DA/MDA under 91.175, the conditions that must be met number:

A. One

B. Two

C. Four

D. Three

20. Spatial disorientation is best overcome by:

A. Relying on bodily sensation

B. Trusting the flight instruments

C. Closing the eyes

D. Large control inputs

21. Hypoxia is especially dangerous because it produces:

A. Immediate severe pain

B. A false sense of well-being masking impairment

C. Loud ringing

D. Sharper thinking

22. The hazardous attitude "rules don't apply to me" is:

A. Anti-authority

B. Macho

C. Resignation

D. Invulnerability

23. The IFR fuel rule with an alternate requires fuel to destination, alternate, then:

A. 30 minutes

B. 15 minutes

C. 45 minutes at normal cruise

D. 1 hour

24. The 1-2-3 rule requires an alternate unless the forecast is at least 2,000 feet and:

A. 1 mile

B. 3 statute miles

C. 2 miles

D. 5 miles

25. The transponder code for lost communications is:

A. 7700

B. 7500

C. 1200

D. 7600

26. Under 91.185, the route priority after lost communications is:

A. Assigned, vectored, expected, filed

B. Filed, expected, vectored, assigned

C. Direct, filed, vectored, assigned

D. Vectored, filed, assigned, expected

27. The lost-communications altitude is the highest of the assigned, minimum IFR, and:

A. Expected altitudes

B. Filed altitude only

C. Pattern altitude

D. Lowest MEA

28. A glass-cockpit AHRS failure removes:

A. Airspeed and altitude

B. Attitude and heading

C. Engine data

D. Fuel quantity

29. An ADC failure removes:

A. Attitude and heading

B. Engine RPM

C. Airspeed, altitude, and vertical speed

D. Fuel flow

30. The glide slope is intercepted from below at the published altitude to avoid:

A. Reverse sensing

B. Loss of DME

C. A false glide slope

D. Excessive sensitivity

31. A WAAS receiver generally does not require a RAIM prediction because it:

A. Uses fewer satellites

B. Cannot fly approaches

C. Relies on ground NAVAIDs

D. Monitors integrity continuously through the augmentation system

32. Class A airspace extends from 18,000 feet MSL up to and including:

A. FL450

B. FL600

C. FL350

D. 60,000 feet AGL

33. Most IFR enroute and approach operations occur in:

A. Class A

B. Class B

C. Class E

D. Class G

34. Structural icing requires visible moisture and a temperature:

A. At or below freezing where the moisture strikes the aircraft

B. Above freezing

C. Above 10 degrees Celsius

D. Below minus 40 only

35. A microburst on approach is dangerous because it causes:

A. Reduced visibility only

B. Hail only

C. A rapid loss of airspeed and altitude

D. Lightning only

36. DME measures:

A. Horizontal ground distance

B. Great-circle distance

C. True-north distance

D. Slant-range distance

37. A clearance to "maintain 5,000" requires the pilot to:

A. Maintain 5,000 until otherwise cleared

B. Climb above 5,000

C. Descend below 5,000

D. Choose any altitude

38. A pilot who cannot comply with a clearance should:

A. Comply anyway

B. Advise ATC and state "unable"

C. Ignore it

D. Squawk 7700

39. Maneuvering speed (V_A) is the maximum speed at which:

A. Flaps may be extended

B. The gear may be lowered

C. The aircraft flies level

D. Full control deflection will not overstress the airframe

40. The priority in any in-flight emergency is:

A. Communicate, navigate, aviate

B. Aviate, navigate, communicate

C. Navigate, aviate, communicate

D. Communicate, aviate, navigate

41. A GPS receiver needs at least how many satellites for a 3D position and time?

A. Two

B. Three

C. Four

D. Five

42. A pilot must identify a VOR before use by its:

A. CDI deflection

B. Morse code identifier

C. TO/FROM flag

D. DME readout

43. After a vacuum failure, the pilot controls bank using the:

A. Failed attitude indicator

B. Failed heading indicator

C. Vertical speed indicator

D. Turn coordinator

44. A standard alternate minimum for an airport with a precision approach is:

A. 800 feet and 2 miles

B. 400 feet and 1 mile

C. 1,000 feet and 3 miles

D. 600 feet and 2 miles

45. A pilot reaching the DA on a precision approach without the runway in sight must:

A. Level off and continue

B. Execute the missed approach

C. Descend 100 more feet

D. Circle

46. A pilot losing the primary flight display reverts to the:

A. Failed PFD

B. GPS map only

C. Standby instruments and magnetic compass

D. Engine instruments

47. A "no gyro" approach is flown using:

A. Full instruments

B. The autopilot

C. A failed transponder

D. ATC-directed standard-rate turns

48. A pilot encountering severe turbulence should:

A. Increase speed

B. Make large inputs

C. Slow to turbulence-penetration speed and avoid abrupt inputs

D. Descend at maximum speed

49. A non-precision approach lacks, compared with a precision approach, a:

A. Final approach course

B. Glidepath meeting precision/APV standards

C. Missed approach point

D. Initial approach fix

50. A pilot must brief the missed approach before the approach so it can be:

A. Filed with ATC

B. Executed immediately if needed

C. Disregarded on glidepath

D. Replaced with a circle

51. A blocked static port causes the altimeter to:

A. Freeze at the altitude of the blockage

B. Read continuously increasing

C. Drop to zero

D. Read correctly

52. A pilot flying partial panel after a vacuum failure controls pitch using the:

A. Attitude indicator

B. Magnetic compass

C. Heading indicator

D. Altimeter and VSI

53. A pilot operating IFR in controlled airspace must have:

A. A second pilot

B. An autopilot

C. A parachute

D. A clearance and a filed flight plan

54. A SIGMET is issued for:

A. Routine conditions

B. Light turbulence only

C. Severe weather hazardous to all aircraft

D. Surface winds only

55. A current navigation database is required for IFR GPS approaches because an expired one may contain:

A. Outdated procedures, waypoints, or frequencies

B. Reversed CDI sensing

C. Faulty altimeter settings

D. Incorrect transponder codes

56. A pilot squawking 7700 has declared:

A. A general emergency, receiving priority

B. Lost communications

C. A hijack

D. VFR

57. A pilot must execute the missed approach if, at the DA or MAP:

A. The approach lights are visible

B. The localizer is sensitive

C. The autopilot disengages

D. The required visual references and conditions are not met

58. The maximum holding airspeed at or below 6,000 feet MSL (USA) is:

A. 175 knots

B. 230 knots

C. 200 knots

D. 265 knots

59. A pilot must treat any thunderstorm as potentially containing:

A. Only light rain

B. Calm air

C. Improved visibility

D. Severe turbulence, hail, lightning, icing, and wind shear

60. The fundamental goal demonstrated by passing the instrument knowledge test is the pilot's readiness to:

A. Fly faster

B. Integrate knowledge across all domains for safe IFR operation

C. Minimize fuel

D. Avoid all approaches

Answer Key

1. A — Acting as PIC under IFR requires an instrument rating and currency per 61.57. That regulation governs instrument recency.

2. C — The transponder must be tested within the preceding 24 calendar months under 91.413. It shares the cycle with the altimeter/static check.

3. A — A blocked pitot with the drain open lets trapped pressure bleed out, so the airspeed indicator drops toward zero. Only with the drain also blocked does it act like an altimeter.

4. A — A vacuum failure disables the attitude indicator and heading indicator in a traditional panel. Both are vacuum-driven.

5. C — A wing stalls when it exceeds its critical angle of attack. This holds at any airspeed or attitude.

6. B — A standard-rate turn changes heading at 3 degrees per second. This is a two-minute 360.

7. C — A small temperature-dew point spread suggests possible fog or low clouds. The air is near saturation.

8. D — "OVC005" means overcast at 500 feet. The height is in hundreds of feet.

9. A — AIRMET Zulu addresses icing and freezing levels. It covers moderate icing and the freezing level.

10. C — A VOR radial is measured from the station. Radials radiate outward.

11. D — An LPV approach is flown to a decision altitude. It provides vertical guidance like a precision approach.

12. A — A standard holding pattern uses right turns. Left turns are nonstandard and must be specified.

13. B — At or below 14,000 feet MSL, the inbound holding leg is timed for 1 minute. Above that it is 1.5 minutes.

14. D — An ODP provides obstacle clearance on departure. It ensures terrain and obstacle separation.

15. B — The MEA guarantees obstacle clearance and navigation signal for the segment. It meets both requirements.

16. A — On a magnetic course of 090 (eastbound, 0–179) below 18,000 feet, the cruising altitude is odd thousands. Eastbound uses odd.

17. C — The FAF on a non-precision approach profile is marked by a Maltese cross. The lightning bolt marks the missed approach.

18. A — On a non-precision approach, the pilot descends to but not below the Minimum Descent Altitude. The MDA is a hard floor.

19. D — Three conditions must all be met under 91.175 to descend below DA/MDA: flight visibility, position for a normal landing, and required visual references. All three apply.

20. B — Spatial disorientation is overcome by trusting the flight instruments. Bodily sensations mislead in IMC.

21. B — Hypoxia is dangerous because it produces a false sense of well-being masking the impairment. The pilot may not notice the degradation.

22. A — "Rules don't apply to me" is the anti-authority attitude. The antidote is "Follow the rules; they are usually right."

23. C — The IFR fuel rule with an alternate requires fuel to destination, alternate, then 45 minutes at normal cruise. The 45-minute reserve is the standard.

24. B — The 1-2-3 rule requires an alternate unless the forecast is at least 2,000 feet and 3 statute miles. Below either, an alternate is required.

25. D — The transponder code for lost communications is 7600. It alerts ATC to the radio failure.

26. A — Under 91.185, the route priority is assigned, vectored, expected, filed (AVEF). The first applicable route is flown.

27. A — The lost-communications altitude is the highest of the assigned, minimum IFR, and expected altitudes. The highest applicable value governs each segment.

28. B — A glass-cockpit AHRS failure removes attitude and heading. Airspeed and altitude, from the ADC, remain.

29. C — An ADC failure removes airspeed, altitude, and vertical speed. Attitude and heading, from the AHRS, remain.

30. C — The glide slope is intercepted from below at the published altitude to avoid a false glide slope. The false lobes lie above the true path.

31. D — A WAAS receiver monitors integrity continuously through the augmentation system, so a separate RAIM prediction is generally not required. The augmentation provides the assurance.

32. B — Class A airspace extends from 18,000 feet MSL up to and including FL600. It is all IFR airspace.

33. C — Most IFR enroute and approach operations occur in Class E airspace. It is the most common controlled airspace for those phases.

34. A — Structural icing requires visible moisture and a temperature at or below freezing where the moisture strikes the aircraft. Both conditions must be present.

35. C — A microburst on approach causes a rapid loss of airspeed and altitude. The shift from headwind to tailwind robs performance.

36. D — DME measures slant-range distance, the direct line from aircraft to station. It exceeds the ground distance, most noticeably when close and high.

37. A — "Maintain 5,000" requires the pilot to maintain 5,000 until otherwise cleared. The assigned altitude is held.

38. B — A pilot who cannot comply with a clearance should advise ATC and state "unable." This lets ATC issue an alternative.

39. D — Maneuvering speed (V_A) is the maximum speed at which full control deflection will not overstress the airframe. Above it, abrupt inputs risk damage.

40. B — The priority in any in-flight emergency is aviate, navigate, communicate. Maintaining control comes first.

41. C — A GPS receiver needs at least four satellites for a 3D position and time. The fourth resolves the timing solution.

42. B — A VOR is identified before use by its Morse code identifier. This confirms the correct station.

43. D — After a vacuum failure, the pilot controls bank using the electrically driven turn coordinator. The vacuum gyros are unreliable.

44. D — A standard alternate minimum for a precision approach is 600 feet and 2 miles. Non-precision uses 800-2.

45. B — Reaching the DA without the runway in sight, the pilot executes the missed approach. There is no level-off or further descent.

46. C — Losing the PFD, the pilot reverts to the standby instruments and magnetic compass. These provide independent backup.

47. D — A "no gyro" approach is flown using ATC-directed standard-rate turns. ATC issues the turn instructions when the gyros have failed.

48. C — Severe turbulence calls for slowing to turbulence-penetration speed and avoiding abrupt inputs. This minimizes structural stress.

49. B — A non-precision approach lacks a glidepath meeting precision/APV standards. It provides lateral guidance only.

50. B — The missed approach is briefed before the approach so it can be executed immediately if needed. Pre-briefing ensures a prompt go-around.

51. A — A blocked static port freezes the altimeter at the altitude of the blockage. It can no longer sense pressure change.

52. D — Flying partial panel after a vacuum failure, the pilot controls pitch using the altimeter and VSI. These pitot-static instruments are unaffected.

53. D — A pilot operating IFR in controlled airspace must have a clearance and a filed flight plan. Both are required.

54. C — A SIGMET is issued for severe weather hazardous to all aircraft. It covers the more severe hazards beyond AIRMETs.

55. A — A current database is required because an expired one may contain outdated procedures, waypoints, or frequencies. Stale data could mislead the approach.

56. A — Squawking 7700 declares a general emergency, bringing priority handling. It mobilizes ATC assistance.

57. D — The pilot executes the missed approach if, at the DA or MAP, the required visual references and conditions are not met. The conditions must be met to continue.

58. C — The maximum holding airspeed at or below 6,000 feet MSL in the USA is 200 knots. The 6,001–14,000 band uses 230 knots.

59. D — A pilot must treat any thunderstorm as potentially containing severe turbulence, hail, lightning, icing, and wind shear. All these hazards can be present.

60. B — The fundamental goal demonstrated by passing the knowledge test is readiness to integrate knowledge across all domains for safe IFR operation. The test confirms the pilot's overall preparedness.