PRACTICE EXAM 32 SIMULATION

1. A pilot finds the destination forecast at the ETA is a 1,500-foot ceiling and 2 miles visibility. Under the 1-2-3 rule, the pilot must:

A. File an alternate

B. File no alternate

C. Cancel the flight

D. Depart VFR

2. A pilot whose instrument currency lapsed 7 months ago, with no qualifying approaches since, must:

A. Take a written test

B. Complete an instrument proficiency check

C. Get a new medical

D. Log 50 hours

3. A pilot notices the airspeed reads zero shortly after takeoff into IMC while the altimeter and VSI work normally. The likely cause is a:

A. Static port blockage

B. Vacuum failure

C. Electrical failure

D. Blocked pitot tube with the drain open

4. A pilot in IMC feels strongly that the aircraft is turning, but the instruments show wings level. The pilot should:

A. Follow the bodily sensation

B. Trust the instruments and maintain level flight

C. Make a large correction

D. Close the eyes

5. A pilot computes that, in a constant-rate standard turn, reversing course (180 degrees) will take:

A. 30 seconds

B. 1 minute

C. 2 minutes

D. 90 seconds

6. A pilot reviewing a METAR reading "OVC003 1/2SM FG" recognizes conditions:

A. Suitable for a visual approach

B. Above all minimums

C. At or near IFR/low-IFR minimums

D. Clear

7. A pilot planning a route at 9,000 feet on a magnetic course of 090 should expect to use a cruising altitude that is:

A. Even thousands

B. Odd thousands

C. Even thousands plus 500

D. Odd thousands plus 500

8. A pilot intercepting the localizer is given a 30-degree intercept heading to avoid:

A. Reverse sensing

B. Loss of DME

C. A false glide slope

D. Overshooting the course

9. A pilot loses the glide slope on an ILS at 1,500 feet AGL. The approach becomes a:

A. Visual approach

B. Precision approach

C. Localizer-only non-precision approach

D. Circling-only approach

10. A pilot recognizes the vacuum gauge reading near zero in cruise IMC and should:

A. Trust the attitude indicator

B. Begin partial-panel procedures using the turn coordinator and pitot-static instruments

C. Ignore it

D. Increase power

11. A pilot holding at a fix at 7,000 feet (at or below 14,000) flies inbound legs timed for:

A. 30 seconds

B. 2 minutes

C. 90 seconds

D. 1 minute

12. A pilot arriving at a holding fix on a heading that places the fix behind the wing-line on the holding side uses which entry?

A. Direct

B. Parallel

C. Teardrop

D. No entry

13. A pilot encountering an "expect further clearance" time understands it governs, after lost communications, when to:

A. Land

B. Leave a clearance limit or holding fix

C. Set the transponder

D. Begin the climb

14. A pilot flying an RNAV approach in a non-WAAS aircraft must, before the FAF, confirm:

A. The transponder code

B. The cruise altitude

C. RAIM availability

D. The fuel grade

15. A pilot is cleared "maintain 4,000 until established, cleared RNAV Runway 9." The pilot should:

A. Descend to the MDA immediately

B. Maintain 4,000 throughout

C. Climb to 4,000

D. Stay at 4,000 until established on the approach, then descend per the procedure

16. A pilot experiencing the "leans" should:

A. Trust the attitude indicator and re-establish a normal scan

B. Lean the other way

C. Follow the sensation

D. Close the eyes

17. A pilot calculates that descending from 6,000 to 2,000 feet (4,000 feet) at 500 fpm requires:

A. 4 minutes

B. 8 minutes

C. 2 minutes

D. 10 minutes

18. A pilot reviewing winds aloft "2450-10" at a cruise level reads wind from 240 at 50 knots and a temperature of:

A. Plus 10 degrees

B. Minus 10 degrees Celsius

C. Minus 100 degrees

D. Plus 100 degrees

19. A pilot must set the altimeter to 29.92 inches when climbing through:

A. 18,000 feet MSL

B. 10,000 feet MSL

C. 14,000 feet MSL

D. The transition altitude at every airport

20. A pilot whose alternator fails in IMC should first:

A. Turn off the battery

B. Increase all electrical loads

C. Continue at full load

D. Shed nonessential electrical loads to conserve the battery

21. A pilot flying a precision approach reaches the DA with the approach lights in sight but no other references. The pilot may:

A. Land immediately

B. Descend to the MDA

C. Circle

D. Descend to 100 feet above TDZE, then must see more to continue

22. A pilot determines an airport with only a non-precision approach requires alternate minimums of:

A. 800 feet and 2 miles

B. 600 feet and 2 miles

C. 1,000 feet and 3 miles

D. 400 feet and 1 mile

23. A pilot recognizing a slowly failing attitude indicator confirms it by:

A. Trusting it more

B. Covering the turn coordinator

C. Cross-checking against the turn coordinator and pitot-static instruments

D. Relying on sensation

24. A pilot flying a DME arc maintains a constant distance by:

A. Flying short segments, turning to keep the distance constant

B. Flying directly at the station

C. Holding one heading

D. Descending steadily

25. A pilot at the MAP of a non-precision approach without the runway in sight must:

A. Execute the published missed approach

B. Descend below the MDA

C. Circle at the MDA

D. Land straight ahead

26. A pilot must report to ATC, when not in radar contact, upon:

A. The fuel grade

B. The number of passengers

C. The outside temperature

D. Crossing a compulsory reporting point

27. A pilot encountering an embedded thunderstorm forecast should expect storms that are:

A. Easily seen

B. Only at night

C. Always weak

D. Obscured within clouds and hard to detect

28. A pilot losing the primary flight display in a glass cockpit reverts to the:

A. Failed PFD

B. GPS map only

C. Standby instruments and magnetic compass

D. Engine instruments

29. A pilot recognizing hypoxia symptoms at altitude should:

A. Continue the flight

B. Increase the workload

C. Use supplemental oxygen and descend if needed

D. Ignore the symptoms

30. A pilot must brief the approach beginning with the:

A. Minimums

B. Airport diagram

C. Profile

D. Briefing strip

31. A pilot flying a coupled ILS must be prepared to:

A. Disconnect the autopilot and hand-fly the missed approach if needed

B. Let the autopilot fly below DA

C. Ignore the DA

D. Circle indefinitely

32. A pilot reads a TAF group "TEMPO 1820/1822 2SM TSRA," indicating:

A. A permanent change

B. The valid period

C. Temporary thunderstorm/rain conditions during that window

D. A wind shift only

33. A pilot flying a no-gyro approach complies with ATC turn instructions using:

A. A steep bank

B. Standard-rate (half on final) turns

C. The failed heading indicator

D. The attitude indicator only

34. A pilot must cross the step-down fix on a non-precision approach:

A. Below the charted altitude

B. At the exact altitude only

C. At or above the charted altitude

D. At any altitude

35. A pilot encountering severe turbulence should:

A. Increase speed

B. Make large inputs

C. Chase the airspeed

D. Maintain attitude, slow to turbulence-penetration speed, avoid abrupt inputs

36. A pilot determines the magnetic compass will show the greatest turning error when turning through:

A. East or west

B. North or south

C. Northeast only

D. Southwest only

37. A pilot must verify GPS RAIM (non-WAAS) because RAIM provides:

A. More satellites

B. Stronger signals

C. Integrity monitoring of the position solution

D. A magnetic backup

38. A pilot reaching the DA on an LPV approach without the runway in sight must:

A. Level off and continue

B. Descend to the MDA

C. Circle

D. Execute the missed approach

39. A pilot flying through visible moisture at minus 5 degrees Celsius should anticipate:

A. Structural icing

B. No hazard

C. Clear skies

D. Improved performance

40. A pilot squawking 7700 has:

A. Lost communications

B. Declared a hijack

C. Declared a general emergency and receives priority

D. Requested VFR

41. A pilot calculates the top of descent to lose 3,000 feet at 600 fpm, requiring:

A. 3 minutes

B. 10 minutes

C. 5 minutes

D. 2 minutes

42. A pilot must identify a VOR by its Morse code identifier because:

A. The CDI confirms it

B. Positive identification ensures the correct station is tuned

C. The TO/FROM flag confirms it

D. The DME confirms it

43. A pilot flying partial panel after a vacuum failure uses the turn coordinator for bank and the _____ for pitch:

A. Attitude indicator

B. Altimeter and VSI

C. Magnetic compass

D. Heading indicator

44. A pilot encountering the somatogravic illusion on a go-around (rapid acceleration) may falsely sense a:

A. Pitch-up, tempting a dangerous nose-down input

B. Descent

C. Turn

D. Roll

45. A pilot flying a circling approach at night recognizes it as:

A. Among the highest-risk maneuvers

B. The safest maneuver

C. Equivalent to a straight-in

D. Always prohibited

46. A pilot whose static port is blocked, with no alternate static source in an unpressurized aircraft, may as a last resort:

A. Use the vacuum pump

B. Turn on pitot heat

C. Disable the transponder

D. Break the VSI glass to admit cabin static pressure

47. A pilot must comply with an ATC clearance unless:

A. The flight is short

B. An amended clearance is obtained or an emergency requires deviation

C. The weather is good

D. The pilot prefers otherwise

48. A pilot flying an RNAV (GPS) approach who loses RAIM after the FAF should:

A. Execute the missed approach unless visual with the runway

B. Continue to the MDA

C. Descend below the MDA

D. Ignore the annunciation

49. A pilot must understand that V_A decreases as aircraft weight:

A. Increases

B. Stays constant

C. Has no effect

D. Decreases

50. A pilot encountering low-level wind shear on approach with a sudden loss of airspeed should:

A. Apply maximum power and execute the escape/go-around procedure

B. Reduce power

C. Lower the nose sharply

D. Continue unchanged

51. A pilot determines an ODP exists to provide:

A. Traffic sequencing

B. Obstacle clearance on departure

C. A shorter route

D. Noise abatement

52. A pilot flying enroute at the MEA is assured of:

A. Radar coverage

B. A direct route

C. The lowest fuel burn

D. Obstacle clearance and navigation signal

53. A pilot recognizing an autopilot mistrim or abnormal behavior should:

A. Increase its authority

B. Wait

C. Disconnect it and hand-fly

D. Add automation

54. A pilot reviewing the freezing level and visible moisture is assessing the potential for:

A. Icing

B. Turbulence only

C. Fog only

D. Wind shear only

55. A pilot flying a non-precision approach using CDFA computes a descent to arrive near the MAP at the MDA, treating the MDA as:

A. A decision altitude

B. A glide slope

C. A hard floor not to be violated

D. Advisory only

56. A pilot must set personal minimums that are:

A. Below the legal minimums

B. More conservative than the legal minimums

C. Equal to zero-zero

D. The same as published always

57. A pilot recognizing the "impulsivity" hazardous attitude ("do something quickly") applies the antidote:

A. "Taking chances is foolish"

B. "It could happen to me"

C. "Not so fast, think first"

D. "I'm not helpless"

58. A pilot flying an approach must remember that the controlling visibility for descent below minimums is the:

A. Reported visibility

B. Forecast visibility

C. Flight visibility observed by the pilot

D. Tower visibility

59. 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

60. The fundamental aim demonstrated across a comprehensive instrument exam is the pilot's ability to:

A. Maximize speed

B. Integrate regulations, systems, weather, navigation, procedures, and judgment for safe IFR flight

C. Minimize fuel

D. Avoid all approaches

Answer Key

1. A — A 1,500-foot ceiling and 2 miles is below the 2,000-and-3 threshold, so the pilot must file an alternate. Either value below the limit triggers the requirement.

2. B — With currency lapsed 7 months and no qualifying approaches, both the 6-month window and grace period have passed, requiring an instrument proficiency check. Only the IPC restores currency then.

3. D — Airspeed reading zero while the altimeter and VSI work normally points to a blocked pitot tube with the drain open. The trapped pressure bled out, dropping the reading.

4. B — Feeling a turn while the instruments show wings level, the pilot trusts the instruments and maintains level flight. The sensation is a false vestibular cue.

5. B — A 180-degree course reversal at standard rate (3 degrees per second) takes 1 minute. Half of the two-minute 360 is one minute.

6. C — "OVC003 1/2SM FG" is a 300-foot ceiling and half-mile visibility, at or near low-IFR minimums. These are demanding conditions.

7. B — On a magnetic course of 090 (eastbound, 0–179) below 18,000 feet, the IFR cruising altitude is odd thousands. Eastbound courses use odd thousands.

8. D — A 30-degree intercept heading is given to avoid overshooting the localizer course. A shallow intercept prevents blowing through.

9. C — Losing the glide slope makes the approach a localizer-only non-precision approach. The loss of vertical guidance changes the procedure.

10. B — A vacuum gauge near zero in cruise IMC calls for partial-panel procedures using the turn coordinator and pitot-static instruments. The vacuum gyros are now unreliable.

11. D — At 7,000 feet (at or below 14,000), the inbound holding leg is timed for 1 minute. Above 14,000 it is 1.5 minutes.

12. C — A fix behind the wing-line on the holding side calls for a teardrop entry. The teardrop sector covers that approach angle.

13. B — An EFC time governs, after lost communications, when to leave a clearance limit or holding fix. It sets the timing for the continued flight.

14. C — Before the FAF in a non-WAAS aircraft, the pilot confirms RAIM availability. RAIM provides the integrity for the GPS approach.

15. D — "Maintain 4,000 until established, cleared RNAV Runway 9" means stay at 4,000 until established on the approach, then descend per the procedure. The altitude is held until established.

16. A — Experiencing the "leans," the pilot trusts the attitude indicator and re-establishes a normal scan. The false bank sensation is overcome by the instruments.

17. B — Descending 4,000 feet at 500 fpm requires 8 minutes. 4,000 divided by 500 equals 8.

18. B — "2450-10" is wind from 240 at 50 knots, temperature minus 10 degrees Celsius. Winds-aloft temperatures are negative unless above 24,000 feet where the sign is dropped.

19. A — The altimeter is set to 29.92 inches when climbing through 18,000 feet MSL. This is the transition to flight levels.

20. D — An alternator failure in IMC calls for first shedding nonessential electrical loads to conserve the battery. This extends the available battery time.

21. D — With only the approach lights in sight at the DA, the pilot may descend to 100 feet above TDZE, then must see additional references to continue. The lights alone do not authorize lower.

22. A — An airport with only a non-precision approach requires alternate minimums of 800 feet and 2 miles. Precision uses the lower 600-2.

23. C — A slowly failing attitude indicator is confirmed by cross-checking against the turn coordinator and pitot-static instruments. Disagreement reveals the failure.

24. A — A DME arc is maintained by flying short segments, turning to keep the distance constant. The arc is approximated by small heading changes.

25. A — At the MAP without the runway in sight, the pilot executes the published missed approach. Descending or circling would be unsafe.

26. D — When not in radar contact, the pilot reports upon crossing a compulsory reporting point. These keep ATC informed without radar.

27. D — An embedded thunderstorm is obscured within clouds and hard to detect. This makes visual avoidance difficult.

28. C — Losing the PFD, the glass-cockpit pilot reverts to the standby instruments and magnetic compass. These provide independent backup.

29. C — Recognizing hypoxia, the pilot uses supplemental oxygen and descends if needed. Restoring oxygen reverses the impairment.

30. D — The approach is briefed beginning with the briefing strip. It consolidates the setup data.

31. A — Flying a coupled ILS, the pilot is prepared to disconnect the autopilot and hand-fly the missed approach if needed. The pilot executes the go-around.

32. C — "TEMPO 1820/1822 2SM TSRA" indicates temporary thunderstorm/rain conditions during that window. TEMPO denotes brief fluctuations.

33. B — A no-gyro approach complies with ATC turn instructions using standard-rate turns (half-standard on final). ATC issues the turn directions.

34. C — A step-down fix must be crossed at or above the charted altitude. The step-downs allow progressive descent.

35. D — Severe turbulence calls for maintaining attitude, slowing to turbulence-penetration speed, and avoiding abrupt inputs. This minimizes structural stress.

36. B — The magnetic compass shows the greatest turning error when turning through north or south. The errors are largest near those headings.

37. C — A non-WAAS pilot verifies RAIM because it provides integrity monitoring of the position solution. RAIM warns of a faulty position.

38. D — Reaching the DA on an LPV without the runway in sight, the pilot executes the missed approach. There is no level-off or further descent.

39. A — Flying through visible moisture at minus 5 degrees Celsius, the pilot anticipates structural icing. Visible moisture plus below-freezing temperatures produce ice.

40. C — Squawking 7700 declares a general emergency and brings priority handling. It mobilizes ATC assistance.

41. C — Losing 3,000 feet at 600 fpm requires 5 minutes. 3,000 divided by 600 equals 5.

42. B — A VOR is identified by its Morse code identifier because positive identification ensures the correct station is tuned. This confirms the navigation source.

43. B — Flying partial panel after a vacuum failure, the pilot uses the turn coordinator for bank and the altimeter and VSI for pitch. These pitot-static instruments are unaffected.

44. A — The somatogravic illusion on a go-around falsely senses a pitch-up, tempting a dangerous nose-down input. The acceleration mimics a climb.

45. A — A circling approach at night is among the highest-risk maneuvers. Many operators restrict it for this reason.

46. D — With a blocked static port and no alternate source in an unpressurized aircraft, the pilot may break the VSI glass to admit cabin static pressure. This restores approximate static input.

47. B — A pilot must comply with a clearance unless an amended clearance is obtained or an emergency requires deviation. These are the exceptions.

48. A — Losing RAIM after the FAF, the pilot executes the missed approach unless visual with the runway. The integrity loss requires the go-around.

49. D — V_A decreases as aircraft weight decreases. A lighter aircraft reaches the limiting load at a lower speed.

50. A — Low-level wind shear with a sudden loss of airspeed calls for applying maximum power and executing the escape/go-around procedure. Maximum performance is needed to recover.

51. B — An ODP exists to provide obstacle clearance on departure. It ensures terrain and obstacle separation.

52. D — Flying at the MEA assures obstacle clearance and navigation signal. It is the minimum enroute altitude meeting both.

53. C — Recognizing an autopilot mistrim or abnormal behavior, the pilot disconnects it and hand-flies. Removing the malfunction restores control.

54. A — Reviewing the freezing level and visible moisture assesses the potential for icing. Both ingredients are needed for structural ice.

55. C — A CDFA computes a descent to arrive near the MAP at the MDA, treating the MDA as a hard floor not to be violated. The continuous descent still respects the floor.

56. B — Personal minimums should be more conservative than the legal minimums. This builds a safety margin.

57. C — The antidote to impulsivity ("do something quickly") is "Not so fast, think first." It counters the urge to act without thinking.

58. C — The controlling visibility for descent below minimums is the flight visibility observed by the pilot. Reported and forecast values do not control.

59. 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.

60. B — The fundamental aim across a comprehensive instrument exam is integrating regulations, systems, weather, navigation, procedures, and judgment for safe IFR flight. The exam tests the whole picture.