

PRACTICE EXAM 20 (60 QUESTIONS)

1. A pilot crosses the IAF, completes the procedure turn, and intercepts the final approach course, but the GPS has not sequenced to the approach mode. The pilot should:

- A. Continue the descent to the published minimums regardless
- B. Verify and manually activate approach mode before descending
- C. Execute the missed approach and re-attempt the procedure
- D. Switch to the standby VOR and ignore the GPS entirely

2. During cruise in IMC, the pilot notices the altimeter and airspeed indicator both behaving abnormally while the vertical speed indicator reads zero in a known climb. The common cause is:

- A. A failure of the vacuum-driven attitude indicator
- B. An electrical failure of the primary flight display
- C. A blocked static system affecting multiple instruments
- D. A blocked pitot tube affecting only the airspeed

3. ATC issues "descend and maintain 5,000, cross WILMA at or above 7,000." The pilot should:

- A. Cross WILMA at 7,000 or higher, then continue down to 5,000
- B. Descend immediately to 5,000 and disregard the WILMA crossing
- C. Maintain 7,000 until the destination and ignore the lower altitude
- D. Cross WILMA at exactly 5,000 then climb back to 7,000 after

4. A pilot on an ILS notices the localizer is alive and centering normally but the glideslope flag is showing. The safest plan is to:

- A. Descend on the glideslope using the last valid indication
- B. Continue toward the runway disregarding the glideslope flag
- C. Continue as a localizer-only approach to the LOC MDA if equipped
- D. Turn immediately to the missed approach holding fix

5. A pilot enters a hold and on the first circuit the inbound leg takes 1 minute 30 seconds against a headwind. On the next outbound leg, the pilot should fly approximately:

- A. The same outbound time as the previous circuit
- B. A longer outbound leg to match the inbound timing
- C. An outbound leg of exactly 1 minute regardless of wind
- D. A shorter outbound leg to achieve a 1-minute inbound

6. A pilot receives "cleared for the RNAV RWY 9 approach, maintain 3,000 until ZEBRA, ZEBRA is the IAF." The pilot should:

- A. Descend to the minimums immediately upon the clearance
- B. Maintain 3,000 until ZEBRA, then descend per the approach
- C. Cross ZEBRA at any altitude and begin the final descent
- D. Hold at ZEBRA until receiving a separate descent clearance

7. During a missed approach, the pilot applies power and pitches up, but the airspeed decays rapidly toward a stall. The most likely cause is:

- A. Excessive nose-down trim set during the approach
- B. An overspeed condition triggering the stall warning
- C. Failure to retract drag (gear/flaps) or excessive pitch attitude
- D. A tailwind component reducing the indicated airspeed

8. A pilot flying VFR-on-top on an IFR clearance encounters a cloud layer ahead at the assigned VFR altitude. The pilot must:

- A. Penetrate the clouds while maintaining the VFR altitude
- B. Request a different altitude or an IFR altitude to remain legal
- C. Cancel the IFR clearance and proceed under visual rules
- D. Descend below all clouds and continue at low altitude

9. ATC states "traffic alert, climb immediately." The pilot, in IMC on an approach, should:

- A. Query ATC for the traffic's position before reacting
- B. Continue the approach since IMC prevents a collision
- C. Maintain altitude and request vectors around the traffic
- D. Comply promptly with the climb instruction for safety

10. A pilot notices the heading indicator and the GPS track diverging steadily over several minutes in stable cruise. The most probable explanation is:

- A. A failure of the GPS receiver's position computation
- B. A blockage in the pitot-static system affecting heading
- C. The aircraft is in an undetected continuous turn
- D. Heading indicator precession requiring realignment to the compass

11. A pilot is told "hold east of WAYNE on the 090 radial, left turns, maintain 6,000." Arriving from the west on a heading of 090, the appropriate entry is:

- A. Teardrop entry with a 30-degree offset to the south
- B. Parallel entry flown on the non-holding side first
- C. Direct entry, turning left to follow the outbound leg

D. Offset entry flown on the holding side of the course

12. A pilot loses the vacuum pump and the attitude indicator slowly rolls off and becomes unreliable in IMC. The pilot should immediately:

A. Cover or disregard the failed instrument and fly partial panel

B. Continue using the attitude indicator until it fully fails

C. Increase power to spin the gyro back to a usable speed

D. Make a steep turn to test the attitude indicator's accuracy

13. A clearance reads "climb and maintain 9,000, expedite through 6,000 for traffic." The pilot should interpret this as:

A. A request to climb at the best rate practical through 6,000

B. An instruction to level off at 6,000 and await further clearance

C. Permission to exceed the aircraft's structural climb limits

D. A requirement to maintain the standard climb rate throughout

14. A pilot flying an approach in gusty crosswind conditions finds the aircraft difficult to stabilize on the localizer. The best course of action is to:

A. Continue the approach with large corrective control inputs

B. Disconnect the autopilot and fly faster to reduce drift

C. Descend below the glidepath to get under the gusts sooner

D. Consider a missed approach if a stabilized approach is not achievable

15. ATC issues "maintain 4,000, expect 8,000 in 10 minutes." If communications are lost after 5 minutes, the pilot should:

A. Climb to 8,000 immediately upon losing communications

- B. Descend to the MEA and squawk the lost-comm code only
- C. Maintain 4,000 until 10 minutes elapse, then climb to 8,000
- D. Remain at 4,000 for the entire remainder of the flight

16. A pilot reaches the FAF on a non-precision approach and begins the descent, then realizes the altimeter was never updated to the current local setting. The pilot should:

- A. Continue the approach using the outdated altimeter setting
- B. Descend below the MDA cautiously to compensate for the error
- C. Ignore the discrepancy since the difference is always negligible
- D. Set the current altimeter and reassess the approach immediately

17. A pilot flying an RNAV approach to LNAV/VNAV minimums in very cold temperatures should be aware that:

- A. The WAAS glidepath automatically corrects for cold temperature
- B. Baro-VNAV guidance may be unauthorized below a temperature limit
- C. Cold temperatures have no effect on the published glidepath
- D. The approach minimums are automatically lowered in cold air

18. ATC says "cleared for the approach" while the pilot is on a published feeder route to the IAF. The pilot should:

- A. Turn directly to the runway and descend to minimums
- B. Continue on the feeder route to the IAF, then fly the approach
- C. Begin the missed approach since no vectors were issued
- D. Hold at the feeder fix until receiving a descent clearance

19. A pilot in a holding pattern receives an EFC time but, as that time approaches, communications are lost. The pilot should:

- A. Depart the holding fix at the EFC time and proceed as cleared
- B. Hold indefinitely at the fix until fuel becomes a concern
- C. Descend and execute the approach immediately upon losing comms
- D. Climb to the MEA and proceed directly to the alternate airport

20. A pilot notices the turn coordinator indicates a turn but the inclinometer ball is centered and the heading is constant in IMC. The most likely situation is:

- A. A coordinated standard-rate turn is in progress
- B. The aircraft is skidding without a heading change
- C. A malfunction of the turn coordinator instrument
- D. A blocked static port affecting the turn coordinator

21. A pilot flying an ILS at minimums sees approach lights but not the runway environment or threshold. Regulations generally allow:

- A. An immediate landing once any lights are visible
- B. Descent to 100 feet above touchdown using the approach lights
- C. Continuing to the runway regardless of the references seen
- D. Descent below DH only after the runway itself is in sight

22. ATC clears a pilot "direct destination, cleared as filed for the remainder." The "cleared as filed" portion means the pilot flies:

- A. The exact route in the flight plan after reaching the destination fix
- B. Direct to the destination ignoring the filed route entirely
- C. Only the first segment and requests the rest in the air
- D. A series of radar vectors provided by the controller throughout

23. A pilot encounters moderate icing on an approach and the airspeed is decaying despite normal power. The pilot should:

- A. Lower the nose aggressively to regain the lost airspeed
- B. Increase power, avoid abrupt maneuvers, and plan to land promptly
- C. Extend full flaps immediately to improve the lift available
- D. Continue the approach at the slower speed without changes

24. A pilot flying a STAR is cleared to "descend via" and notices an upcoming waypoint with an "at or above 6,000" restriction. The pilot must:

- A. Descend below 6,000 before reaching that waypoint
- B. Cross the waypoint at exactly 6,000 and level off there
- C. Ignore the restriction since "descend via" overrides it
- D. Cross the waypoint at 6,000 or higher per the restriction

25. A pilot on autopilot in approach mode finds the aircraft will not capture the glideslope from above when joining the localizer high. The reason is:

- A. Glideslope capture must occur from below at the intercept altitude
- B. The autopilot requires the gear to be down for capture
- C. The localizer must be lost before the glideslope can capture
- D. Approach mode disables glideslope capture entirely

26. A pilot receives "reduce speed to 160, descend and maintain 4,000, contact approach 119.2." The pilot should accomplish these by:

- A. Performing all three actions in any random order
- B. Contacting approach first before any other action
- C. Reducing speed, descending, and switching frequency as directed

D. Descending first and ignoring the speed assignment

27. A pilot notices the DME distance increasing while flying what should be an inbound course to the station. The most likely explanation is:

- A. The aircraft is tracking outbound or the wrong course is set
- B. The DME is malfunctioning and should be disregarded
- C. A normal indication when approaching the station inbound
- D. The slant-range error is causing a false distance increase

28. A pilot is established in a hold and the controller issues "cleared to the airport, descend and maintain 3,000, cleared for the approach." The pilot should:

- A. Leave the hold, descend to 3,000, and commence the approach
- B. Remain in the hold until reaching the EFC time first
- C. Climb to 3,000 and request a separate approach clearance
- D. Begin the approach from the holding altitude without descending

29. A pilot flying in IMC experiences the somatogravic illusion during a go-around acceleration, sensing a steep climb. The correct response is to:

- A. Push the nose down to counter the perceived climb
- B. Reduce power to slow the perceived rate of climb
- C. Trust the sensation and lower the pitch attitude
- D. Trust the attitude indicator and maintain the proper climb

30. ATC issues "cross the 20 DME fix at 6,000, then maintain 4,000." The pilot, currently at 8,000, should:

- A. Descend immediately to 4,000 and disregard the 6,000 crossing

- B. Plan the descent to cross the 20 DME fix at 6,000, then to 4,000
- C. Maintain 8,000 until the fix, then descend directly to 4,000
- D. Cross the fix at 4,000 and climb back to 6,000 afterward

31. A pilot finds the GPS-computed VNAV path would descend below a charted step-down minimum altitude at a fix. The pilot must:

- A. Honor the higher charted step-down altitude at the fix
- B. Follow the VNAV path as it is more precise than the chart
- C. Average the two altitudes for a compromise descent
- D. Continue and resolve the discrepancy after the approach

32. A pilot receives a clearance to hold with no EFC time stated. The pilot should:

- A. Assume an EFC time of 30 minutes from entering the hold
- B. Refuse the holding clearance until an EFC time is provided
- C. Request an EFC time from ATC for lost-communications planning
- D. Depart the hold immediately since none was specified

33. A pilot flying an approach loses the primary attitude display on a glass cockpit and the autopilot disconnects. The first action should be to:

- A. Establish control using the standby attitude indicator
- B. Re-engage the autopilot to stabilize the aircraft quickly
- C. Troubleshoot the primary display before flying the aircraft
- D. Begin an immediate descent to exit instrument conditions

34. ATC assigns "fly heading 040, maintain 5,000, vectors for the ILS RWY 4." The pilot understands the heading is intended to:

- A. Take the aircraft directly to the runway threshold
- B. Position the aircraft for an immediate descent to minimums
- C. Establish the aircraft in a holding pattern near the airport
- D. Position the aircraft to intercept the localizer course

35. A pilot flying a non-precision approach with a published VDP reaches the VDP without the runway in sight. The pilot should:

- A. Maintain the MDA and continue to the missed approach point
- B. Descend below the MDA immediately at the VDP regardless
- C. Begin a normal descent to the runway using the VDP timing
- D. Execute the missed approach at the VDP without delay

36. A pilot in cruise notices the magnetic compass swinging erratically during turns but steady in level flight. This behavior is:

- A. A sign of a failed compass requiring immediate replacement
- B. Caused by a vacuum failure affecting the compass card
- C. Normal magnetic dip error most pronounced during turns
- D. An indication the heading indicator has fully failed

37. A pilot flying an RNAV approach observes the lateral CDI sensitivity has not increased approaching the FAF as expected. The pilot should suspect:

- A. A normal condition since sensitivity changes only after the FAF
- B. The receiver has not transitioned to approach mode properly
- C. The autopilot has overridden the GPS lateral guidance
- D. A localizer signal is interfering with the GPS course

38. ATC issues "maintain 6,000 until established, cleared VOR RWY 27 approach." The pilot must:

- A. Descend to the approach minimums upon receiving the clearance
- B. Stay at 6,000 until established on a published segment, then descend
- C. Climb to 6,000 only after crossing the final approach fix
- D. Remain at 6,000 throughout the entire approach to the runway

39. A pilot on an IFR flight plan wants to deviate around a thunderstorm cell. The correct procedure is to:

- A. Deviate first and inform ATC of the deviation afterward
- B. Maintain course since IFR clearances cannot be amended
- C. Descend below the cell without notifying the controller
- D. Request a deviation from ATC and wait for the clearance if able

40. A pilot reaches the DA on an LPV approach with the runway environment in sight and aligned. The pilot may:

- A. Continue the descent visually to land on the runway
- B. Level off at the DA and circle until fully aligned
- C. Execute the missed approach since the DA was reached
- D. Descend below the DA only after a separate clearance

41. A pilot in a holding pattern with a strong crosswind notices the pattern drifting toward the non-holding side. To stay within protected airspace, the pilot should:

- A. Increase the bank angle on all turns to tighten the pattern
- B. Lengthen the outbound leg to compensate for the drift
- C. Apply wind correction on the legs to counter the drift

D. Shorten the inbound leg to reduce the time exposed to wind

42. A pilot flying an ILS notices the glideslope needle centered but altitude is far higher than expected for the DME distance. The pilot should:

- A. Continue the descent trusting the centered glideslope needle
- B. Increase the descent rate sharply to regain the proper path
- C. Disregard the DME and rely solely on the glideslope display
- D. Suspect a false glideslope lobe and verify against altitude/distance

43. ATC clears a pilot "present position direct GULFF, then via the arrival." This requires the pilot to:

- A. Return to the nearest airway before navigating to GULFF
- B. Navigate directly to GULFF, then join the published arrival
- C. Request radar vectors all the way to the GULFF waypoint
- D. Hold at the present position until receiving further clearance

44. A pilot encounters an unexpected altimeter setting much lower than the departure setting upon arrival. Failing to update would cause the aircraft's true altitude to be:

- A. Lower than indicated, reducing the obstacle clearance margin
- B. Higher than indicated, increasing the clearance margin
- C. Exactly the same since altimeters self-correct in flight
- D. Unpredictable without knowing the outside air temperature

45. A pilot flying partial panel after a vacuum failure must make a 90-degree heading change. The best technique is to:

- A. Use the failed attitude indicator to set the bank precisely

- B. Make a steep turn to complete the change quickly
- C. Use the turn coordinator and timing for a standard-rate turn
- D. Reference the GPS track and turn until it reads correctly

46. ATC states "say altitude leaving and present heading." The pilot should report:

- A. The originally filed cruising altitude and the magnetic course
- B. The assigned final altitude and the runway heading expected
- C. The current altitude being passed and the current heading
- D. The minimum en route altitude and the desired track only

47. A pilot flying an approach with a coupled autopilot reaches the DA and the runway is not in sight. The pilot should:

- A. Disconnect or command the autopilot through the missed approach
- B. Allow the autopilot to continue descending toward the runway
- C. Re-engage approach mode to attempt another glideslope capture
- D. Reduce power and let the aircraft settle toward the threshold

48. A pilot notices the GPS shows the aircraft tracking correctly but the VOR CDI for a cross-radial fix is not centering as expected near the fix. The pilot should:

- A. Trust the VOR exclusively and disregard the GPS position
- B. Descend immediately assuming the fix has been crossed
- C. Continue without verification since the GPS is primary always
- D. Verify the VOR frequency, identification, and OBS setting

49. A pilot is cleared for takeoff with a clearance void time of 1815Z at a non-towered field, and it is now 1810Z. The pilot should:

- A. Delay departure to verify weather, accepting a new void time later
- B. Depart any time within the next hour using the clearance
- C. Hold on the ground until the tower issues a sequence number
- D. Depart before 1815Z or the clearance becomes void

50. A pilot flying in IMC suspects carburetor icing as the engine RPM slowly decreases with no throttle change. The correct action is to:

- A. Lean the mixture aggressively to raise the engine temperature
- B. Apply full carburetor heat and expect a brief RPM drop first
- C. Reduce the throttle to idle to clear the suspected ice
- D. Increase the throttle continuously to overcome the power loss

51. ATC issues holding instructions and the pilot is unsure of the correct entry. The pilot should:

- A. Request the controller to assign the specific entry to use
- B. Determine and fly the appropriate entry based on the geometry
- C. Enter using a direct entry regardless of the arrival heading
- D. Hold without turning until the entry becomes obvious

52. A pilot flying an RNAV (GPS) approach gets a "RAIM" alert just before the FAF. The required action is to:

- A. Continue to the MDA since the FAF was nearly reached
- B. Switch to the moving map for guidance to the runway
- C. Slow the aircraft and proceed to the lowest minimums
- D. Discontinue the approach as the position may be unreliable

53. A pilot reads back "maintain 5,000" but was actually cleared to "maintain 6,000," and the controller does not correct it. If a conflict occurs, the pilot is:

- A. Fully protected because the controller failed to catch the error
- B. Not responsible since the readback was the pilot's best effort
- C. Responsible for flying the clearance as actually issued (6,000)
- D. Required to maintain 5,000 as read back regardless of the error

54. A pilot transitioning to visual conditions at the MDA over a brightly lit city beyond a dark area should be alert for:

- A. Excessive glare washing out the runway environment entirely
- B. The autokinesis illusion from the steady city lights
- C. The black hole effect over the dark area causing a low approach
- D. Carburetor icing during the final descent to the runway

55. ATC clears a flight "via radar vectors, maintain 3,000 until established, cleared ILS RWY 9." The pilot is established when:

- A. The aircraft reaches 3,000 feet on the assigned vector
- B. The controller states the aircraft is identified on radar
- C. The pilot reports the airport or runway is in sight
- D. The aircraft intercepts the localizer (or glideslope) as published

56. A pilot encountering severe turbulence in IMC should prioritize:

- A. Maintaining a precise assigned altitude at all costs
- B. Increasing airspeed to exit the turbulent area faster
- C. Making large control inputs to counter every gust

D. Holding a level attitude at turbulence-penetration speed

57. A pilot notices the localizer needle is fully deflected and will not center as the aircraft nears the approach course. The pilot should first:

- A. Continue inbound assuming the needle will center shortly
- B. Verify the correct frequency is tuned and the localizer identified
- C. Descend to the minimums using the glideslope alone
- D. Execute the missed approach without further investigation

58. A pilot is cleared "descend at pilot's discretion, maintain 5,000" and begins descending, then wants to level at 7,000 temporarily. This is:

- A. Permitted because pilot's discretion allows any altitude changes
- B. Allowed only with a separate clearance from the controller
- C. Not allowed; once leaving an altitude the pilot cannot return to it
- D. Required to be reported but otherwise acceptable to do

59. A pilot in cruise notices the vacuum gauge reading low and the attitude and heading indicators beginning to drift. The prudent action is to:

- A. Plan to use partial-panel techniques and consider diverting
- B. Continue normally as the gyros will stabilize on their own
- C. Increase engine RPM to restore the vacuum pump output
- D. Switch off the affected instruments to save electrical power

60. A pilot flying an approach is told "maintain 170 knots to the marker." This instruction is intended to:

- A. Test the aircraft's high-speed handling near the runway

- B. Manage the spacing and sequencing of the arrival flow
- C. Help the pilot conserve fuel during the final approach
- D. Ensure the aircraft remains above its stalling speed margin

Answer Key

1. B — If the GPS has not sequenced to approach mode at the final approach course, the pilot must verify and manually activate approach mode before descending. Approach mode provides the tighter CDI sensitivity and integrity the final segment requires. Descending without it would use improper guidance scaling.
2. C — When the altimeter, airspeed indicator, and vertical speed indicator all behave abnormally, the common cause is a blocked static system, since all three rely on static pressure. A single blocked port affects multiple instruments. Selecting alternate static air restores normal indications.
3. A — "Cross WILMA at or above 7,000" with a lower assigned altitude requires crossing WILMA at 7,000 or higher, then continuing the descent to 5,000. The "at or above" restriction must be satisfied first. Descending early would violate the crossing restriction.
4. C — With a valid localizer but a flagged glideslope, the safest plan is to continue as a localizer-only approach to the LOC MDA if equipped. The localizer still gives reliable lateral guidance. Descending on an unreliable glideslope would forfeit obstacle protection.
5. D — An inbound leg that took 1 minute 30 seconds against a headwind means the outbound leg should be flown shorter than 1 minute to yield a 1-minute inbound leg. The headwind on the inbound leg slows ground progress, so the outbound time is reduced. Adjusting outbound timing keeps the pattern within protected airspace.
6. B — "Maintain 3,000 until ZEBRA, ZEBRA is the IAF" requires maintaining 3,000 until reaching ZEBRA, then descending per the approach. The altitude is held until the initial approach fix. Descending early forfeits the protection of the higher altitude.

7. C — Rapidly decaying airspeed during a missed approach is most likely from failing to retract drag (gear and flaps) or holding an excessive pitch attitude. The drag and steep attitude exceed available climb performance. Reducing pitch and cleaning up the aircraft restores airspeed.

8. B — A VFR-on-top pilot facing clouds at the assigned VFR altitude must request a different altitude or an IFR altitude to remain legal, since VFR-on-top requires maintaining VFR cloud clearances. Penetrating the cloud would violate those requirements. The pilot stays clear of clouds or obtains an IFR altitude.

9. D — A "traffic alert, climb immediately" from ATC requires prompt compliance with the climb for safety. The instruction is an urgent separation maneuver. Querying or delaying could allow a collision; immediate action is essential even in IMC.

10. D — A steady divergence between the heading indicator and GPS track in stable cruise is most likely heading-indicator precession requiring realignment to the compass. Mechanical gyros drift over time. Resetting the heading indicator to the magnetic compass corrects it.

11. C — Arriving from the west on heading 090 to hold east on the 090 radial with left turns places the entry in the direct-entry sector, turning left to follow the outbound leg. The arrival heading aligns with the inbound course direction. A direct entry simply turns to the outbound after crossing the fix.

12. A — When the vacuum pump fails and the attitude indicator becomes unreliable, the pilot should cover or disregard the failed instrument and fly partial panel using the remaining reliable instruments. Trusting a failing gyro leads to control errors. Partial-panel technique relies on the turn coordinator, airspeed, altimeter, and compass.

13. A — "Expedite through 6,000 for traffic" is a request to climb at the best rate practical through that altitude. It seeks prompt vertical movement for separation. The pilot uses an increased climb rate while staying within safe limits.

14. D — When gusty crosswinds make it impossible to stabilize on the localizer, the best action is to consider a missed approach if a stabilized approach is not achievable. An unstable approach is a primary accident cause. Going around and reattempting or diverting is the safe choice.

15. C — With "expect 8,000 in 10 minutes," a lost-comm pilot maintains 4,000 until 10 minutes elapse, then climbs to 8,000. The "expect" altitude is used at the stated time after the clearance. This keeps the lost-comm aircraft predictable to ATC.

16. D — Realizing the altimeter was never updated, the pilot should set the current altimeter and reassess the approach immediately. An incorrect setting produces an altitude error that can compromise obstacle clearance. Correcting it before continuing restores accurate minimums.

17. B — On an LNAV/VNAV approach in very cold temperatures, baro-VNAV vertical guidance may be unauthorized below a published temperature limit because cold air distorts the baro-derived glidepath. The chart notes the minimum temperature. Below it, the baro-VNAV path cannot be used for the approach.

18. B — "Cleared for the approach" while on a published feeder route directs the pilot to continue on the feeder route to the IAF, then fly the approach. The feeder route is the charted transition into the procedure. Turning direct or descending early would bypass the protected path.

19. A — A holding pilot who loses communications as the EFC time approaches departs the holding fix at the EFC time and proceeds as cleared. The EFC time governs when to leave the fix under lost-comm rules. This keeps the aircraft on its expected schedule for ATC planning.

20. C — A turn coordinator indicating a turn while the ball is centered and the heading is constant points to a malfunction of the turn coordinator. A real turn would change the heading. The disagreeing instrument is the suspect one when others agree.

21. B — Seeing the approach lights but not the runway, regulations generally allow descent to 100 feet above the touchdown zone using the approach lights as the visual reference. Below 100 feet, the runway environment itself (such as the threshold or red terminating bars) must be visible. This rule governs the transition to landing.

22. A — "Cleared as filed for the remainder" means the pilot flies the exact route in the flight plan after reaching the destination fix portion of the clearance. The filed route applies beyond the direct segment. It saves the controller from reading the full routing.

23. B — With moderate icing and decaying airspeed, the pilot should increase power, avoid abrupt maneuvers, and plan to land promptly. Ice raises stall speed and degrades performance, so gentle handling and a prompt exit are key. Aggressive control inputs risk an ice-induced stall.

24. D — An "at or above 6,000" restriction on a "descend via" arrival requires crossing the waypoint at 6,000 or higher. The restriction sets a floor at that fix. Descending below before the waypoint would violate the published constraint.

25. A — Glideslope capture must occur from below at the intercept altitude; joining the localizer high prevents the autopilot from capturing the glideslope. Capturing from above risks locking onto a false lobe. Level intercept at the published altitude ensures proper capture.

26. C — The clearance to reduce speed, descend, and switch frequency should be accomplished as directed — reducing speed, descending to 4,000, and contacting approach on 119.2. The pilot complies with each element. Carrying out all parts keeps the aircraft on the controller's plan.

27. A — DME distance increasing on what should be an inbound course indicates the aircraft is tracking outbound or the wrong course is set. Inbound flight should decrease the DME. The pilot should reassess the course and heading to correct the tracking.

28. A — "Cleared to the airport, descend and maintain 3,000, cleared for the approach" directs the pilot to leave the hold, descend to 3,000, and commence the approach. The clearance supersedes the hold. The pilot proceeds without waiting for the EFC time.

29. D — The somatogravic illusion during a go-around creates a false steep-climb sensation, and the correct response is to trust the attitude indicator and maintain the proper climb. Pushing the nose down to "correct" the false climb would descend into terrain. The instruments, not the sensation, are reliable.

30. B — "Cross the 20 DME fix at 6,000, then maintain 4,000" requires planning the descent to cross the fix at 6,000, then continuing to 4,000. The crossing restriction must be met before the lower altitude. Starting from 8,000, the pilot times the descent to satisfy the fix altitude.

31. A — When the GPS VNAV path would descend below a charted step-down minimum, the pilot must honor the higher charted step-down altitude. The published minimum provides obstacle clearance. The VNAV path must not lead the aircraft below it.

32. C — A holding clearance with no EFC time should prompt the pilot to request an EFC time from ATC for lost-communications planning. The EFC is needed to know when to leave the fix if communications fail. Obtaining it completes the lost-comm contingency.

33. A — Losing the primary attitude display with the autopilot disconnected requires first establishing control using the standby attitude indicator. Aviating comes before troubleshooting or re-engaging automation. The standby instrument provides the independent attitude reference needed.

34. D — "Vectors for the ILS RWY 4" means the assigned heading is intended to position the aircraft to intercept the localizer course. The vector sets up the intercept. The pilot expects to turn onto the localizer when it comes alive.

35. A — Reaching the VDP without the runway in sight, the pilot maintains the MDA and continues to the missed approach point. The VDP is only the point to begin descent if the runway is visible. Without visual references, the pilot holds MDA to the MAP and then goes missed.

36. C — A compass that swings during turns but reads steady in level flight is exhibiting normal magnetic dip error, most pronounced when turning through north and south. This is inherent compass behavior, not a failure. The pilot compensates using known turning errors.

37. B — If lateral CDI sensitivity has not increased approaching the FAF, the pilot should suspect the receiver has not transitioned to approach mode properly. Approach mode triggers the tighter scaling. Without it, the guidance is too coarse for the final segment.

38. B — "Maintain 6,000 until established, cleared VOR RWY 27 approach" requires staying at 6,000 until established on a published segment, then descending as charted. Descending early forfeits obstacle protection. The altitude is tied to lateral establishment on the procedure.

39. D — To deviate around a thunderstorm on an IFR plan, the correct procedure is to request a deviation from ATC and, if able, wait for the clearance. ATC coordinates the deviation with other

traffic. In a genuine emergency the pilot may deviate and advise, but the normal procedure is to request first.

40. A — Reaching the DA on an LPV with the runway environment in sight and aligned, the pilot may continue the descent visually to land. The required visual references and alignment permit landing. The DA is the decision point, and the criteria to continue are met.

41. C — A holding pattern drifting toward the non-holding side calls for applying wind correction on the legs to counter the drift. Correcting for wind keeps the racetrack within protected airspace. The drift indicates insufficient crosswind correction.

42. D — A centered glideslope with altitude far higher than expected for the DME distance should prompt the pilot to suspect a false glideslope lobe and verify against altitude and distance. False lobes occur above the true glidepath. Cross-checking prevents following an erroneous path.

43. B — "Present position direct GULFF, then via the arrival" directs the pilot to navigate directly to GULFF, then join the published arrival. No return to an airway is needed. The RNAV system computes the direct track to GULFF before the STAR.

44. A — Arriving with a much lower actual altimeter setting than set, failing to update makes true altitude lower than indicated, reducing obstacle clearance. The instrument over-reads when the real pressure is below the set value. Updating the setting restores accurate altitude.

45. C — A partial-panel 90-degree heading change is best made using the turn coordinator and timing for a standard-rate turn (3° per second, so 30 seconds for 90°). The failed attitude indicator cannot be trusted. Timed standard-rate turns provide accurate heading changes without the gyros.

46. C — "Say altitude leaving and present heading" asks the pilot to report the current altitude being passed and the current heading. These give ATC the real-time state during a transition. The pilot states the present indicated altitude and heading.

47. A — Reaching the DA on a coupled approach without the runway in sight requires the pilot to disconnect or command the autopilot through the missed approach. The aircraft must climb and follow the missed approach path. Allowing continued descent toward the runway would be unsafe.

48. D — A VOR cross-radial fix that will not center as expected near the fix should prompt the pilot to verify the VOR frequency, identification, and OBS setting. An error in any of these explains the indication. Confirming the setup ensures the fix is correctly identified.

49. D — With a void time of 1815Z and the current time 1810Z, the pilot must depart before 1815Z or the clearance becomes void. The void time bounds the departure window. Missing it requires obtaining a new clearance.

50. B — Suspecting carburetor icing, the correct action is to apply full carburetor heat and expect a brief RPM drop first as the ice melts and passes through. The initial roughness and RPM drop precede recovery. Carb heat warms the induction air to clear and prevent ice.

51. B — Unsure of the holding entry, the pilot should determine and fly the appropriate entry based on the geometry of the arrival heading and pattern. ATC does not assign the entry. Selecting the correct entry (direct, teardrop, or parallel) keeps the aircraft in protected airspace.

52. D — A RAIM alert just before the FAF means the position may be unreliable, so the pilot must discontinue the approach. Integrity can no longer be assured for the final segment. Continuing on an unmonitored position is unsafe; the missed approach or another procedure is required.

53. C — A readback error the controller fails to catch does not relieve the pilot, who is responsible for flying the clearance as actually issued (6,000). Both share the duty to catch errors, but the real clearance binds the pilot. Careful readback and listening prevent the conflict.

54. C — Transitioning to visual at the MDA over a dark area before a brightly lit city heightens the black hole effect, which tends to cause a low approach. The dark foreground removes visual cues. Cross-checking instruments guards against descending too low.

55. D — On a radar-vectors-to-final clearance, the aircraft is "established" when it intercepts the localizer (or glideslope) as published. Reaching an altitude or being radar-identified is not the same as being established. The pilot maintains the assigned altitude until intercepting the course.

56. D — In severe turbulence in IMC, the priority is holding a level attitude at turbulence-penetration speed rather than chasing altitude or fighting every gust. Attitude control protects the aircraft and occupants. Large inputs or excess speed can overstress the airframe.

57. B — A fully deflected localizer needle that will not center near the approach course should first prompt the pilot to verify the correct frequency is tuned and the localizer is identified. A mistuned or unidentified signal is a common cause. Confirming the setup precedes any descent or missed approach.

58. C — "Descend at pilot's discretion, maintain 5,000" gives flexibility in timing and rate, but once the pilot leaves an altitude they may not return to it, so climbing back to 7,000 is not allowed. The discretion applies only to the descent. Reclaiming a vacated altitude would require a new clearance.

59. A — A low vacuum gauge with drifting attitude and heading indicators calls for planning to use partial-panel techniques and considering a diversion. The gyros are failing. Preparing for partial panel and landing soon is the prudent response.

60. B — "Maintain 170 knots to the marker" is intended to manage the spacing and sequencing of the arrival flow. Speed control helps the controller maintain separation between aircraft. It is a routine traffic-management instruction, within the aircraft's safe speed range.