

PRACTICE EXAM 16 SIMULATION

1. A pilot has just copied an IFR clearance and read it back to clearance delivery without error. What happens to the IFR flight plan as a result of accepting this clearance and departing?

- A. It remains inactive until the pilot phones flight service to open it
- B. It is activated only after the first compulsory position report
- C. It becomes active upon accepting the clearance and departing into the system
- D. It must be refiled because read-back constitutes a new request

2. A pilot copying a clearance in CRAFT order has just written the clearance limit and the route. According to the standard sequence, what element comes next?

- A. The transponder code
- B. The departure frequency
- C. The altitude to maintain
- D. The clearance void time

3. Immediately after losing two-way communication in IMC, what is the pilot's first action before applying the route and altitude rules?

- A. Begin an immediate descent toward the nearest airport
- B. Proceed directly to the filed destination at any altitude
- C. Turn toward the alternate and hold
- D. Set the transponder to 7600 and attempt to restore communication

4. A pilot has just recognized a vacuum pump failure in IMC, with the attitude and heading indicators now unreliable. What is the immediate priority before troubleshooting or communicating?

- A. Cycle the vacuum system circuit breaker to attempt a restart
- B. Contact ATC to report the failure first
- C. Maintain aircraft control by transitioning to partial-panel technique
- D. Begin a descent regardless of clearance or terrain

5. A pilot at the decision altitude on an ILS does not have any required visual references in sight. What is the correct next action?

- A. Execute the published missed approach immediately
- B. Descend 100 feet below DA to search for the runway
- C. Level off at the DA and circle until the runway appears
- D. Continue the descent on the glide path to the threshold

6. A pilot has reached the missed approach point on a non-precision approach and is now executing the missed approach. What governs the climb and routing that follows?

- A. The pilot's discretion to choose any climb heading
- B. A direct climb to the en route altitude on the current heading
- C. Radar vectors that are always provided automatically
- D. The published missed approach procedure shown on the chart

7. A pilot has just been cleared for an ILS approach via radar vectors to the final approach course. The chart depicts a procedure turn. What does the pilot do regarding the procedure turn?

- A. Fly the procedure turn because it is charted
- B. Fly the procedure turn only if above the charted altitude
- C. Request a holding clearance to perform the reversal
- D. Do not fly the procedure turn, since being vectored to final omits it

8. A pilot has slowed the aircraft and is about to cross the holding fix to begin a hold from the holding-side sector. What entry should the pilot fly?

- A. A direct entry, turning into the pattern after crossing the fix
- B. A parallel entry on the non-holding side
- C. A teardrop entry at a 30-degree offset
- D. No entry; orbit the fix until established

9. A pilot has established the outbound leg of a hold with a strong headwind on the outbound leg. To produce a correct 1-minute inbound leg, what adjustment is made to the outbound leg?

- A. Fly the outbound leg shorter than 1 minute
- B. Fly the outbound leg longer than 1 minute
- C. Fly the outbound leg exactly 1 minute regardless of wind
- D. Reverse the turn direction to compensate

10. A pilot intercepting the localizer has centered the localizer needle and is now approaching the glide slope from below. What is the correct next step?

- A. Descend immediately at maximum rate to capture the glide slope
- B. Intercept the glide slope as it centers and begin the descent
- C. Maintain altitude and disregard the glide slope until the FAF
- D. Climb to recapture the localizer before the glide slope

11. A pilot computing an IFR flight has summed destination fuel and alternate fuel. What must be added next to satisfy the regulatory minimum?

- A. A 30-minute reserve at normal cruising speed
- B. A 60-minute reserve at normal cruising speed
- C. Nothing further, since destination and alternate suffice
- D. A 45-minute reserve at normal cruising speed

12. A pilot has determined that the destination forecast fails the 1-2-3 rule. What is the next planning step?

- A. Cancel the IFR flight plan before departure
- B. Select and qualify an alternate airport
- C. Reduce the planned cruising altitude
- D. File the flight as VFR instead

13. A pilot has selected a candidate alternate served only by a non-precision approach. What forecast minimums must that alternate meet at the ETA, absent non-standard minimums?

- A. A ceiling of 600 feet and visibility of 2 statute miles
- B. A ceiling of 400 feet and visibility of 1 statute mile
- C. A ceiling of 800 feet and visibility of 2 statute miles
- D. Basic VFR conditions only

14. A pilot has just landed at a non-towered airport after completing an IFR flight. What must the pilot do regarding the flight plan?

- A. Close the IFR flight plan with ATC or flight service
- B. Wait for the tower to close it automatically
- C. File a cancellation flight plan
- D. Allow the transponder to close it on landing

15. A pilot in a constant-airspeed climb has established a fixed climb power setting. As the aircraft approaches the target altitude, what is the correct technique to avoid overshooting?

- A. Continue the climb until reaching the exact target altitude, then push over abruptly
- B. Increase power as the altitude nears to maintain the climb rate
- C. Reverse the climb into a descent at the target altitude
- D. Lead the level-off before reaching the target altitude

16. A pilot has just entered a standard-rate turn and intends to roll out on a specific heading. When should the rollout begin?

- A. Exactly upon reaching the target heading
- B. Leading the target heading by about half the bank angle
- C. After passing the target heading by the full bank angle
- D. No lead is needed for a standard-rate turn

17. A pilot recovering from a nose-low unusual attitude with increasing airspeed has just reduced power. What is the correct next action?

- A. Level the wings before raising the nose
- B. Raise the nose immediately while still banked
- C. Add power back to arrest the descent
- D. Maintain the bank until airspeed decreases

18. A pilot recovering from a nose-high unusual attitude sees airspeed decreasing toward a stall. After adding power, what should the pilot do?

- A. Hold the nose-high attitude until airspeed builds
- B. Increase back pressure to climb away
- C. Lower the nose and level the wings nearly simultaneously
- D. Reduce power again to settle the aircraft

19. A pilot has tuned an ILS frequency and is about to rely on the localizer for guidance. What must the pilot do before using it for the approach?

- A. Set the decision altitude into the autopilot
- B. Confirm the runway length on the airport diagram
- C. Note the glide slope angle from the chart
- D. Verify the Morse code identifier to confirm the correct, operating facility

20. A pilot flying a GPS/RNAV approach is approaching the final approach fix and notices the CDI has not tightened to approach sensitivity. What must be confirmed before relying on the guidance?

- A. That the transponder is set to the assigned code
- B. That the navigator has sequenced into approach mode
- C. That the compass matches the heading indicator
- D. That the autopilot is engaged in altitude hold

21. A pilot has just begun a standard weather briefing. According to the standard sequence, which element is presented first?

- A. The winds aloft forecast
- B. The destination forecast
- C. The adverse conditions
- D. The NOTAMs

22. A pilot reviewing a standard briefing has just received the adverse conditions and the VFR-not-recommended statement. What element typically comes next?

- A. The NOTAMs
- B. The ATC delays
- C. The destination forecast
- D. The synopsis

23. A pilot decoding a METAR has read the station identifier and the date-time group. According to the standard METAR order, what element comes next?

- A. The altimeter setting
- B. The wind
- C. The temperature and dew point
- D. The remarks

24. A pilot has identified that the temperature and dew point in a METAR are converging on a calm, cooling evening. What weather development should the pilot anticipate next?

- A. Convective thunderstorms building overnight
- B. Radiation fog forming as saturation approaches
- C. Clear-air turbulence near the jet stream
- D. Rapidly rising ceilings by midnight

25. A pilot has detected the first complete TO-to-FROM reversal on the VOR while tracking inbound. What does this event mark?

- A. Station passage over or abeam the VOR
- B. A reverse-sensing condition requiring an OBS change
- C. Interception of the glide slope
- D. A failure of the CDI requiring a backup

26. A pilot climbing on a SID encounters a charted climb gradient the aircraft cannot meet on a hot day. What is the correct next action?

- A. Advise ATC that the required gradient cannot be met
- B. Continue and attempt the gradient anyway
- C. Fly the lateral path while ignoring the vertical requirement
- D. Cancel IFR and depart VFR without coordination

27. A pilot has just been assigned a STAR with a "descend via" clearance. What is the pilot now responsible for managing?

- A. Only the lateral routing, since ATC assigns each altitude
- B. Nothing, since crossing restrictions are advisory
- C. Only the final crossing restriction at the last fix
- D. The descent to meet every published crossing restriction along the arrival

28. A pilot in a hold has an EFC time approaching and only enough fuel to reach the alternate plus the required reserve. As fuel nears that threshold, what is the prudent next action?

- A. Continue holding until the EFC time regardless of fuel
- B. Advise ATC and depart for the alternate while reserves remain
- C. Descend below the holding altitude to conserve fuel
- D. Increase airspeed to shorten the hold

29. A pilot has experienced a static port blockage and the altimeter is frozen. What is the correct corrective action?

- A. Select the alternate static source
- B. Switch to GPS altitude as the primary reference
- C. Cycle the pitot heat to clear the port
- D. Disregard the altimeter and use the VSI alone

30. A pilot has selected the alternate static source in an unpressurized cabin. What change in the altimeter indication should the pilot anticipate?

- A. The altimeter reads slightly higher than actual
- B. The altimeter reads slightly lower than actual
- C. The altimeter reads exactly the same as before
- D. The altimeter freezes at the current value

31. A pilot intends to verify VOR accuracy for IFR use at a designated airborne checkpoint. What maximum bearing error is permitted?

- A. Plus or minus 2 degrees
- B. Plus or minus 4 degrees
- C. Plus or minus 6 degrees
- D. Plus or minus 10 degrees

32. A pilot has completed a VOR accuracy check and found the error within tolerance. What must the pilot do to make the check valid?

- A. Notify ATC of the check before the next flight
- B. Repeat the check using a second method
- C. Wait 24 hours before flying IFR
- D. Log the date, place, bearing error, and signature

33. A pilot planning an IFR route between two busy airports wants the best chance of a clearance "as filed." What should the pilot do?

- A. File a creative direct route to save distance
- B. File at the lowest possible altitude
- C. Avoid filing any route and request vectors
- D. File the published preferred IFR route if one exists

34. A pilot has determined an ODP exists for a non-towered departure airport in low visibility. What should the pilot do with it?

- A. Review and fly the ODP to ensure obstacle clearance
- B. Disregard it, since ATC will provide vectors
- C. Use it only if a SID is unavailable
- D. Treat it as advisory and depart on any heading

35. A pilot reaches a charted changeover point between two VORs on an airway. What action does this point call for?

- A. Begin a descent to the minimum crossing altitude
- B. Change navigation from the station behind to the station ahead
- C. Report position to ATC regardless of radar contact
- D. Reverse course to re-intercept the airway

36. A pilot has been holding and now loses two-way communication in IMC. What does the EFC time tell the pilot to do?

- A. Leave the holding fix at the EFC time and proceed per the clearance
- B. Remain in the hold indefinitely until contacted
- C. Squawk 1200 and proceed VFR
- D. Climb to the maximum authorized altitude immediately

37. A pilot establishing partial-panel flight after a vacuum failure needs a bank reference. Which instrument does the pilot use to keep the wings level?

- A. The attitude indicator
- B. The heading indicator
- C. The turn coordinator
- D. The vertical speed indicator

38. A pilot on partial panel needs to control pitch without the attitude indicator. Which combination provides the pitch picture?

- A. The turn coordinator and magnetic compass
- B. The altimeter, airspeed indicator, and VSI together
- C. The tachometer and manifold pressure gauge
- D. The heading indicator and OBS

39. A pilot decoding a winds-aloft group sees the direction digits exceed 36. What convention must be applied next?

- A. Treat the wind as light and variable
- B. Disregard the group as a coding error
- C. Add 100 to the direction and subtract 50 from the speed
- D. Subtract 50 from the direction and add 100 to the speed

40. A pilot has read the wind and visibility in a METAR and now sees "BKN012." How should this be interpreted in the sequence?

- A. A scattered layer at 1,200 feet that is not a ceiling
- B. The altimeter setting in hundreds of feet
- C. A broken layer at 1,200 feet AGL, constituting the ceiling if lowest
- D. The vertical visibility into an obscuration

41. A pilot must determine the maximum holding airspeed after climbing through 6,000 feet to 10,000 feet MSL. What limit now applies?

- A. 200 knots indicated airspeed
- B. 230 knots indicated airspeed
- C. 265 knots indicated airspeed
- D. 175 knots indicated airspeed

42. A pilot at FL150 establishing a hold must time the inbound leg. What standard inbound leg time applies?

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

43. A pilot recognizes the hazardous attitude "What's the use?" arising after a series of setbacks. What is the correct antidote to apply?

- A. "Follow the rules, they are usually right"
- B. "Not so fast, think first"
- C. "I'm not helpless; I can make a difference"
- D. "Taking chances is foolish"

44. A pilot identifying risk before a flight applies the PAVE checklist. Which set correctly lists the four elements?

- A. Pilot, Altitude, Visibility, Equipment
- B. Pilot, Aircraft, enVironment, External pressures
- C. Procedure, Aircraft, Visibility, Emergency
- D. Pilot, Approach, Vectors, External pressures

45. A pilot encounters an AIRMET advising of icing and freezing levels. Which type is this?

- A. AIRMET Sierra
- B. AIRMET Tango
- C. AIRMET Romeo
- D. AIRMET Zulu

46. A pilot reviewing advisories sees a Convective SIGMET along the route. Which hazards does this product imply in addition to thunderstorms?

- A. Severe turbulence, severe icing, and low-level wind shear
- B. Light rime icing affecting only small aircraft
- C. Mountain obscuration and marginal ceilings only
- D. Routine surface wind shifts at terminal airports

47. A pilot is about to use datalink NEXRAD radar near building thunderstorms. How should the radar be used given its latency?

- A. For strategic routing around weather with a wide margin, not close-in avoidance
- B. To thread precisely between adjacent cells
- C. As a real-time depiction of current storm positions
- D. As the sole means of tactical separation from cells

48. A pilot has read a TAF group beginning "FM2000." How should this change be applied in the forecast sequence?

- A. As a temporary fluctuation lasting under an hour after 2000Z
- B. As a 30 percent probability after 2000Z
- C. As a rapid, complete change to new conditions beginning at 2000Z
- D. As a gradual change centered on 2000Z

49. A pilot has read a TAF group "TEMPO 0306/0309 BKN008." How long do these conditions apply within the window?

- A. Continuously for the entire three-hour window

- B. For a fixed nine minutes
- C. As a permanent change beginning at 0306Z
- D. For temporary periods totaling less than half the window

50. A pilot wants the lowest minimums with vertical guidance on an RNAV approach using a WAAS receiver. Which minimum line should the pilot select if published?

- A. The LNAV line, since it is lateral only
- B. The LPV line, which offers the lowest minimums with vertical guidance
- C. The circling line
- D. The localizer back-course line

51. A pilot identifies that the attitude indicator disagrees with the altimeter, VSI, turn coordinator, and heading indicator, all of which show level flight. What should the pilot conclude?

- A. The attitude indicator is the suspect instrument
- B. The aircraft is in a coordinated turn
- C. The static system has failed
- D. All instruments have failed together

52. A pilot must determine which instrument is connected to both pitot and static pressure. Which is it?

- A. The airspeed indicator
- B. The altimeter

- C. The vertical speed indicator
- D. The turn coordinator

53. A pilot at the decision altitude on an ILS now has the approach lighting system in sight but not the runway threshold. What does the regulation generally permit?

- A. An immediate mandatory missed approach with no continuation
- B. Descending all the way to the runway on the lights alone
- C. Circling at the DA until the threshold appears
- D. Continuing below DA on the approach lights within the defined limit

54. A pilot computing a leg has a distance of 60 nautical miles and a forecast groundspeed of 120 knots. What is the time en route?

- A. 20 minutes
- B. 40 minutes
- C. 45 minutes
- D. 30 minutes

55. A pilot has experienced a pitot tube blockage with the drain hole also blocked, and the static system is clear. How will the airspeed indicator now behave?

- A. It will freeze at the last valid value
- B. It will read zero immediately
- C. It will behave like an altimeter, rising in a climb and falling in a descent

D. It will read maximum and stay pinned

56. A pilot has just descended into an inversion layer on a clear, calm morning. What conditions should the pilot expect beneath the inversion?

A. Strong convective turbulence and towering cumulus

B. Rapidly improving visibility and clearing skies

C. Trapped moisture and haze with reduced visibility

D. Severe clear-air turbulence

57. A pilot is determining whether an alternate is required and the destination forecast shows a 2,500-foot ceiling and 4 statute miles visibility for the required window. What is the result?

A. An alternate meeting precision minimums must be filed

B. No alternate is required, since the forecast satisfies 2,000 and 3

C. The flight must wait until the ceiling exceeds 4,000 feet

D. An alternate meeting non-precision minimums must be filed

58. A pilot has identified that an approach chart shows a triangle symbol indicating non-standard alternate minimums. What is the next step before using the airport as an alternate?

A. Check the published non-standard minimums on the chart

B. Apply the standard 600-2 minimums regardless

C. Treat the airport as unusable for any approach

D. Apply only the 1-2-3 rule and ignore the minimums

59. A pilot transitioning from terminal to approach mode on a GPS approach observes what change in CDI sensitivity?

- A. Sensitivity widens to allow more maneuvering
- B. Sensitivity remains identical to the en route setting
- C. Sensitivity tightens to provide finer course guidance
- D. The CDI switches to displaying VOR radials

60. A pilot has just declared an emergency after a serious in-flight failure. What does declaring the emergency provide?

- A. It cancels the IFR flight plan automatically
- B. It brings ATC's full assistance and priority handling
- C. It requires landing at the nearest airport regardless of suitability
- D. It transfers pilot-in-command authority to the controller

Answer Key

1. C — An IFR flight plan becomes active upon accepting the clearance and departing into the system; there is no separate "open" call as with VFR. Read-back confirms receipt but does not refile the plan. Acceptance plus departure is what activates it.

2. C — In CRAFT order — Clearance limit, Route, Altitude, Frequency, Transponder — the altitude follows the route. The frequency and transponder come later in the sequence. CRAFT both orders the clearance and provides a copying template.

3. D — The first action on losing communication is to set the transponder to 7600 and attempt to restore communication, before applying the route and altitude rules. Squawking 7600 alerts ATC to the failure.

Descending, proceeding to the destination, or diverting come only within the structured rules that follow.

4. C — After recognizing a vacuum failure in IMC, the immediate priority is to maintain aircraft control by transitioning to partial-panel technique — aviate first. Troubleshooting, communicating, or descending come only after control is assured. The accident record warns against attending to a problem while losing control.

5. A — At the decision altitude without any required visual references, the pilot executes the published missed approach immediately. Descending below DA to search, circling at DA, or continuing to the threshold are unsafe and not permitted. A prompt go-around is the correct, expected action.

6. D — Once the missed approach is initiated at the missed approach point, the published missed approach procedure governs the climb and routing. The pilot does not choose an arbitrary heading or assume automatic vectors. The published path is what protects the aircraft from terrain and obstacles.

7. D — When being radar vectored to the final approach course, the pilot does not fly the charted procedure turn, because vectors position the aircraft to intercept final directly. The presence of a charted procedure turn does not make it mandatory under vectors. Flying an unneeded reversal could conflict with traffic.

8. A — Crossing the holding fix from the holding-side sector calls for a direct entry: cross the fix and turn into the pattern. Parallel and teardrop entries serve the other two sectors. The entry must match the arrival geometry relative to the holding course and side.

9. B — With a strong headwind on the outbound leg, the aircraft covers less distance outbound, so the outbound leg must be flown longer than 1 minute to produce a correct 1-minute inbound leg. The pilot times the inbound leg and adjusts the outbound leg to compensate. Wind correction keeps the pattern within protected airspace.

10. B — After establishing on the localizer, the pilot intercepts the glide slope as it centers and begins the descent, keeping both needles centered. A maximum-rate descent or ignoring the glide slope is incorrect, and climbing to recapture the localizer is unnecessary once centered. The glide slope is intercepted from below as it comes alive.

11. D — After summing destination and alternate fuel, a 45-minute reserve at normal cruising speed must be added to satisfy the IFR minimum. The reserve is always 45 minutes under IFR, not 30 or 60, and it is required beyond destination and alternate fuel. The reserve is the final stacked component.

12. B — When the destination forecast fails the 1-2-3 rule, the next step is to select and qualify an alternate airport. The flight need not be canceled or refiled VFR, and reducing altitude does not address the alternate requirement. The alternate must then meet its own minimums at the ETA.

13. C — An alternate served only by a non-precision approach must meet the standard non-precision alternate minimums of 800 feet and 2 statute miles, absent non-standard minimums. The 600-2 figure applies to a precision approach. These standard values apply unless the chart publishes otherwise.

14. A — At a non-towered airport, the pilot must close the IFR flight plan after landing — by radio, phone, or flight service — since no tower observes the landing. The transponder does not close it, and no cancellation flight plan is filed. Forgetting can trigger an unnecessary search.

15. D — To avoid overshooting the target altitude in a climb, the pilot leads the level-off before reaching the target altitude, beginning to lower the nose in advance. Climbing to the exact altitude then pushing over abruptly, increasing power, or reversing into a descent are incorrect. Leading the level-off produces a smooth arrival at altitude.

16. B — The rollout from a standard-rate turn should begin leading the target heading by about half the bank angle, so the aircraft arrives on the heading rather than overshooting. Rolling out exactly at the target heading overshoots. The half-bank-angle lead is the standard technique.

17. A — In a nose-low recovery, after reducing power the pilot levels the wings before raising the nose, to avoid tightening the descending spiral and overstressing the airframe. Raising the nose while banked or adding power is incorrect. Roll first, then recover pitch.

18. C — In a nose-high recovery with decreasing airspeed, after adding power the pilot lowers the nose and levels the wings nearly simultaneously to regain airspeed and prevent the stall. Holding the nose-high attitude or increasing back pressure deepens the stall, and reducing power again is wrong. Power plus a lower nose restores energy.

19. D — Before relying on the localizer, the pilot must verify the Morse code identifier to confirm the correct, operating facility, since an off-air or misidentified signal would give false guidance. Setting the DA, checking runway length, or noting the glide slope angle do not confirm facility identity. Positive identification is required before using any navaid.

20. B — If the CDI has not tightened to approach sensitivity near the final approach fix, the pilot must confirm the navigator has sequenced into approach mode before relying on the guidance. The transponder, compass, and autopilot are not the issue. Approach scaling provides the precision the segment requires.

21. C — The standard weather briefing begins with adverse conditions — hazards significant enough to alter or cancel the flight. The synopsis, current conditions, forecasts, winds aloft, NOTAMs, and delays follow. Leading with adverse conditions ensures the most critical information is not missed.

22. D — After adverse conditions and the VFR-not-recommended statement, the synopsis typically comes next, giving the big-picture causes — fronts, pressure systems, and air masses. NOTAMs and ATC delays come near the end, and the destination forecast follows the synopsis and current conditions. The synopsis sets the context.

23. B — In the standard METAR order, the wind follows the station identifier and date-time group. Visibility, weather, sky condition, temperature/dew point, altimeter, and remarks follow. The fixed order makes METARs readable at a glance.

24. B — Converging temperature and dew point on a calm, cooling evening signals approaching saturation, the classic precursor to radiation fog overnight. It does not indicate convective thunderstorms, clear-air turbulence, or rising ceilings. The narrowing spread points to imminent condensation.

25. A — The first complete TO-to-FROM reversal while tracking inbound marks station passage over or abeam the VOR. It is a reliable station-passage cue, not reverse sensing, glide slope interception, or a failure. It signals the aircraft has crossed the station.

26. A — If the aircraft cannot meet a charted SID climb gradient, the pilot must advise ATC, because the gradient exists for obstacle clearance or crossing restrictions. Attempting it anyway or ignoring the vertical requirement is unsafe, and canceling IFR without coordination is improper. ATC can then issue an alternative.

27. D — On a "descend via" clearance, the pilot is responsible for managing the descent to meet every published crossing restriction along the arrival. ATC does not assign each altitude individually, and the restrictions are not advisory. The pilot must satisfy all of them in sequence.

28. B — As fuel in the hold nears the threshold that leaves only enough to reach the alternate plus the required reserve, the prudent action is to advise ATC and depart for the alternate while reserves remain. Holding to the EFC, descending, or speeding up does not solve the fuel deficit. Anticipation governs fuel management in a hold.

29. A — A static port blockage that freezes the altimeter is corrected by selecting the alternate static source. GPS altitude is not a legal substitute, pitot heat does not clear a static port, and using the VSI alone is inadequate. The alternate static source restores a usable static pressure reference.

30. A — With the alternate static source selected in an unpressurized cabin, the altimeter typically reads slightly higher than actual, because cabin static pressure is slightly lower than outside. The airspeed also reads slightly high and the VSI momentarily shows a climb. The altimeter-reads-higher change is the one to anticipate.

31. C — A designated airborne checkpoint permits a maximum VOR bearing error of ± 6 degrees. VOT and ground checkpoints allow ± 4 degrees, and a dual-VOR check allows a 4-degree difference. The check must be logged.

32. D — To make a VOR accuracy check valid, the pilot must log the date, place, bearing error, and signature. Notifying ATC, repeating with a second method, or waiting 24 hours are not required. The logged record is what validates the check.

33. D — To maximize the chance of a clearance "as filed" between two busy airports, the pilot files the published preferred IFR route if one exists. A creative direct route often results in a re-route amendment. Preferred routes organize traffic flow.

34. A — When an ODP exists for a non-towered departure airport in low visibility, the pilot should review and fly it to ensure obstacle clearance, since no controller watches the terrain. It is not advisory, and ATC will not necessarily provide vectors. The ODP is the pilot's safeguard.

35. B — At a charted changeover point between two VORs, the pilot changes navigation from the station behind to the station ahead. It is not a descent, reporting, or course-reversal instruction. COPs at non-midpoint locations are charted explicitly.

36. A — If communication is lost while holding, the EFC time tells the pilot to leave the holding fix at that time and proceed per the clearance and lost-communication rules. The pilot does not hold indefinitely, squawk VFR, or climb to the maximum altitude. The EFC becomes a critical instruction without further word from ATC.

37. C — On partial panel after a vacuum failure, the turn coordinator provides the bank reference, kept at zero rate to hold the wings level. The attitude and heading indicators are lost with the vacuum system, and the VSI addresses pitch. The turn coordinator is electrically driven and survives.

38. B — On partial panel, pitch is controlled using the altimeter, airspeed indicator, and VSI together, reconstructing the pitch picture without the attitude indicator. The turn coordinator and compass handle bank and heading, and the tachometer or OBS are not pitch references. Combining the pitot-static instruments gives the pitch picture.

39. D — When the winds-aloft direction digits exceed 36, the convention is to subtract 50 from the direction and add 100 to the speed, which decodes winds of 100–199 knots. Adding to the direction or treating it as light-and-variable or an error is incorrect. The convention fits high winds into the two-digit format.

40. C — "BKN012" decodes as a broken layer at 1,200 feet AGL, which constitutes the ceiling if it is the lowest broken or overcast layer. It is not a scattered layer, an altimeter setting, or vertical visibility. Broken and overcast layers form the ceiling; the lowest governs.

41. B — At 10,000 feet MSL the aircraft is in the 6,001–14,000 foot tier, where the maximum holding airspeed is 230 KIAS. The tiers are 200 up to 6,000 feet, 230 from 6,001 to 14,000 feet, and 265 above 14,000 feet. Slowing to the applicable speed keeps the aircraft within protected airspace.

42. C — Above 14,000 feet MSL the standard inbound holding leg is 1.5 minutes; FL150 (15,000 feet) is above 14,000 feet. At or below 14,000 feet the leg is 1 minute. The 14,000-foot break governs holding leg timing.

43. C — "What's the use?" is the resignation hazardous attitude, countered by "I'm not helpless; I can make a difference." Each hazardous attitude has a specific memorized antidote applied on self-recognition. Resignation surrenders the pilot's agency, which the antidote restores.

44. B — The PAVE checklist consists of Pilot, Aircraft, enVironment, and External pressures. The other options substitute fabricated elements. PAVE structures pre-flight and in-flight risk identification.

45. D — AIRMET Zulu advises of icing and freezing levels. Sierra covers IFR conditions and mountain obscuration, and Tango covers turbulence and strong surface winds. The phonetic initial is the memory aid.

46. A — A Convective SIGMET implies severe turbulence, severe icing, and low-level wind shear, in addition to the thunderstorms it reports. It is significant to all aircraft and sits atop the advisory hierarchy. Its implications are the most serious of the weather advisories.

47. A — Datalink NEXRAD radar should be used for strategic routing around weather with a wide margin, not close-in avoidance, because of its inherent latency. It must not be used to thread between cells or treated as real-time or as the sole tactical separation. Wide margins are essential.

48. C — A TAF group beginning "FM" indicates a rapid, complete change to new conditions beginning at the stated time, replacing everything before it. It is not a brief TEMPO fluctuation, a probability, or a gradual change. FM is the strongest, lasting change indicator.

49. D — A TEMPO group denotes temporary fluctuations lasting under an hour each and totaling less than half the window. It is not continuous, a fixed nine minutes, or a permanent change. TEMPO interrupts the prevailing forecast rather than replacing it.

50. B — The LPV line offers the lowest minimums with vertical guidance for a WAAS-equipped aircraft, approaching ILS-like minimums. LNAV is lateral only, and the circling and back-course lines are not LPV. WAAS enables the vertical guidance LPV minimums assume.

51. A — When the attitude indicator disagrees with the altimeter, VSI, turn coordinator, and heading indicator, all showing level flight, the attitude indicator is the suspect instrument. The cross-check identifies the disagreeing instrument by majority agreement. No single instrument is trusted in isolation.

52. A — The airspeed indicator is the only instrument connected to both pitot (ram) and static pressure, displaying the difference as airspeed. The altimeter and VSI use the static source only. This is why a pitot blockage uniquely corrupts the airspeed indication.

53. D — With the approach lighting system in sight at the DA, the regulation generally permits continuing below DA on the approach lights within the defined limit, until other required references appear. It is not an immediate mandatory missed approach, nor may the aircraft descend all the way on the lights alone. The approach-light allowance is a specific, limited provision.

54. D — Time equals distance divided by groundspeed: $60 \text{ NM} \div 120 \text{ knots} = 0.5 \text{ hour} = 30 \text{ minutes}$. At 120 knots the aircraft covers 2 NM per minute, so 60 NM takes 30 minutes. Forecast groundspeed already accounts for wind.

55. C — A pitot tube blockage with the drain hole also blocked traps pressure, so the airspeed indicator responds only to static pressure changes and behaves like an altimeter — rising in a climb, falling in a descent. It does not freeze, read zero, or pin at maximum when the static system is clear. The trapped-pressure behavior is the signature of this blockage.

56. C — Beneath an inversion on a clear, calm morning, the pilot should expect trapped moisture and haze with reduced visibility, since the inversion acts like a lid. It is associated with smooth but hazy conditions, not convection, clearing, or clear-air turbulence. The trapped-moisture effect defines the inversion.

57. B — A 2,500-foot ceiling and 4 statute miles visibility for the required window satisfy the 1-2-3 rule (at least 2,000 feet and 3 statute miles), so no alternate is required. Both parts of the rule are met. The 1-2-3 test applies to the destination forecast.

58. A — A triangle symbol indicating non-standard alternate minimums requires the pilot to check the published non-standard minimums on the chart before using the airport as an alternate. The standard 600-2 does not automatically apply, the airport is not necessarily unusable for the approach, and the 1-2-3 rule does not replace the alternate minimums. Always check the chart.

59. C — Transitioning from terminal to approach mode on a GPS approach, the CDI full-scale sensitivity tightens to provide finer course guidance for the precision the approach requires. It does not widen, stay constant, or switch to VOR radials. The pilot must confirm the mode before relying on the guidance.

60. B — Declaring an emergency brings ATC's full assistance and priority handling, unlocking resources such as vectors and the nearest suitable airport. It does not cancel the flight plan, force a landing at an unsuitable airport, or transfer command to the controller. Reluctance to declare when one exists has contributed to avoidable accidents.