PRACTICE EXAM 25 SIMULATION

1. Why does the airspeed indicator behave like an altimeter when the pitot tube and its drain hole are both blocked?

A. Because the static port has also failed simultaneously

B. Because trapped pressure in the line then responds only to changes in static pressure

C. Because the instrument switches automatically to vacuum power

D. Because ram air pressure increases as the aircraft slows

2. Why are the attitude indicator and the turn coordinator typically powered by different sources?

A. So that a single power-source failure cannot remove all attitude information at once

B. Because the turn coordinator cannot operate on electrical power

C. To reduce the total weight of the instrument panel

D. Because the attitude indicator draws too little current to be electrical

3. Why does DME display the aircraft's altitude above the station when directly overhead rather than zero?

A. Because DME measures slant range, the straight-line distance to the station

B. Because the station stops transmitting when the aircraft is overhead

C. Because the receiver adds a fixed safety offset near the station

D. Because the signal reflects off the ground beneath the aircraft

4. Why must a pilot make progressively smaller corrections on the localizer as the runway is approached?

A. Because the glide slope overrides lateral guidance near the runway

B. Because the localizer course narrows and becomes more sensitive near the runway

C. Because the localizer signal weakens and must be flown loosely

D. Because the VOR sensitivity increases at the same rate

5. Why does a high-pressure system generally bring fair weather in the Northern Hemisphere?

A. Because air rises and cools, condensing into clouds

B. Because it rotates counterclockwise, dispersing moisture

C. Because it always forms over cold, dry land

D. Because descending, diverging air warms and dries

6. Why is the mature stage of a thunderstorm the most hazardous?

A. Because only updrafts are present, lifting the aircraft uncontrollably

B. Because the cloud has not yet developed precipitation

C. Because downdrafts have entirely replaced the updrafts

D. Because updrafts and downdrafts coexist with hail, lightning, and severe turbulence

7. Why must datalink NEXRAD radar not be used for close-in thunderstorm avoidance?

A. Because it cannot detect convective precipitation at all

B. Because it is transmitted only to aircraft above 18,000 feet

C. Because processing and transmission latency make the image lag the storm's real position

D. Because the image refreshes too rapidly for a pilot to interpret

8. Why is the 45-minute fuel reserve always required under IFR regardless of weather?

A. Because the regulation sets it as a fixed minimum for instrument operations

B. Because it replaces the alternate requirement in good weather

C. Because it is reduced to 30 minutes when no alternate is needed

D. Because it applies only to night operations

9. Why does the magnetic compass become unreliable during turns and acceleration?

A. Because of magnetic dip producing turning and acceleration errors

B. Because it loses vacuum power during maneuvers

C. Because the heading indicator overrides it in turns

D. Because variation changes rapidly during a turn

10. Why is the inbound leg of a holding pattern the one that is timed, rather than the outbound leg?

A. Because the inbound leg is unaffected by wind

B. Because regulations prohibit timing the outbound leg

C. Because the inbound leg must be a consistent standard length, making it the controlled leg

D. Because the outbound leg is always exactly one minute

11. Why does selecting the alternate static source in an unpressurized cabin make the altimeter read slightly high?

A. Because the pitot pressure increases when the alternate source is selected

B. Because cabin static pressure is slightly lower than the outside static pressure

C. Because the alternate source feeds ram air into the altimeter

D. Because the instrument loses electrical power on the alternate source

12. Why is a procedure turn not flown when the aircraft is being radar vectored to the final approach course?

A. Because procedure turns are prohibited in radar environments

B. Because the glide slope makes the reversal unnecessary

C. Because vectors require two reversals instead of one

D. Because the vectors already position the aircraft to intercept final directly

13. Why does WAAS enable vertically guided approaches that a basic GPS cannot?

A. Because ground stations measure GPS errors and broadcast corrections that sharpen accuracy and integrity

B. Because WAAS provides an independent inertial reference

C. Because WAAS links directly to ground-based ILS glide slopes

D. Because WAAS reduces the number of required satellites to two

14. Why must structural icing have both visible moisture and a freezing temperature to form?

A. Because ice forms only when supercooled liquid water freezes on contact with the airframe

B. Because dry air below freezing carries enough moisture to ice

C. Because warm visible moisture freezes upon contact regardless of temperature

D. Because icing depends only on altitude, not on moisture or temperature

15. Why does the EFC time matter in a lost-communication scenario while holding?

A. Because it sets the maximum holding airspeed during the failure

B. Because it tells the pilot when to leave the holding fix and proceed

C. Because it assigns the transponder code to use while holding

D. Because it defines the inbound leg length in nautical miles

16. Why is aviate placed before communicate in the emergency priority hierarchy?

A. Because maintaining aircraft control must precede any other action

B. Because communicating restores failed instruments automatically

C. Because ATC must be informed before the pilot may fly the aircraft

D. Because navigation always precedes control of the aircraft

17. Why does the 1-2-3 rule apply to the destination forecast rather than the alternate?

A. Because the alternate's weather is never considered in planning

B. Because the rule sets the visibility needed to land at the alternate

C. Because the rule determines the fuel reserve for the alternate leg

D. Because the rule decides whether an alternate is needed at all, based on the destination

18. Why is the turn coordinator usually retained after a vacuum failure?

A. Because it is typically driven by the electrical system, not the vacuum system

B. Because it shares the vacuum source with the attitude indicator

C. Because it runs on ram air from the pitot tube

D. Because it requires no power source to operate

19. Why does a cold front produce more violent but shorter-lived weather than a warm front?

A. Because a cold front moves slowly, allowing weather to build gradually

B. Because a warm front forces air up more steeply than a cold front

C. Because a cold front forces warm air up steeply, concentrating weather in a narrow band

D. Because a cold front produces only stratiform clouds with no convection

20. Why must a pilot trust the instruments rather than bodily sensations in IMC?

A. Because instruments are required equipment under the regulations

B. Because the vestibular and somatosensory systems produce false sensations without a horizon

C. Because bodily sensations are accurate but slower to respond

D. Because the instruments are immune to all failures

21. Why does a temperature inversion reduce visibility beneath it?

A. Because it produces strong convective mixing

B. Because it forces moisture upward away from the surface

C. Because it increases the temperature–dew point spread

D. Because it acts as a lid, trapping moisture, haze, and pollutants below it

22. Why is the MOCA always equal to or lower than the MEA on the same segment?

A. Because the MOCA guarantees more navigation coverage than the MEA

B. Because the MOCA includes a higher obstacle-clearance margin

C. Because the MEA ignores obstacles entirely

D. Because the MOCA relaxes the signal-coverage requirement, needing only obstacle clearance plus 22 NM reception

23. Why does filing a published preferred IFR route increase the chance of a clearance "as filed"?

A. Because preferred routes are designed to organize traffic flow, so ATC issues them readily

B. Because preferred routes are always the shortest distance

C. Because filing any route guarantees that exact clearance

D. Because preferred routes bypass all controlled airspace

24. Why must the pilot close an IFR flight plan after landing at a non-towered airport?

A. Because the transponder cannot close it automatically anywhere

B. Because no tower is present to observe the landing and close it

C. Because the flight plan converts to VFR upon landing

D. Because ATC requires a new flight plan to be filed for closure

25. Why does the standard inbound holding leg lengthen to 1.5 minutes above 14,000 feet?

A. Because crosswinds are always stronger at high altitude

B. Because DME holding requires longer legs above 14,000 feet

C. Because the maximum holding airspeed decreases at altitude

D. Because the regulation sets a longer standard leg time in that altitude band

26. Why does an instrument rating not expire once it is earned?

A. Because it must be renewed every 24 calendar months

B. Because it is permanent on the certificate; only currency must be maintained

C. Because it converts to a private certificate after two years

D. Because the knowledge test result keeps it valid indefinitely

27. Why does RNP differ fundamentally from basic RNAV?

A. Because RNP uses only ground-based navaids

B. Because RNP navigates to a lower accuracy than RNAV

C. Because RNP adds on-board performance monitoring and alerting

D. Because RNP cannot use GPS as a source

28. Why does spatial disorientation affect even highly skilled pilots?

A. Because only fatigued pilots experience it

B. Because it can be eliminated by stronger concentration

C. Because the illusions are products of normal human physiology

D. Because skilled pilots ignore their instruments

29. Why must the wings be leveled before raising the nose in a nose-low unusual attitude recovery?

A. Because raising the nose first regains airspeed faster

B. Because pulling while banked tightens the spiral and overstresses the airframe

C. Because the bank has no effect on the recovery

D. Because power must be added before any other action

30. Why does the FAA require a VOR accuracy check every 30 days rather than every 24 months like the altimeter?

A. Because VOR receivers are less important than altimeters

B. Because navigation precision can drift and must be verified frequently

C. Because the 30-day check is optional and rarely needed

D. Because VOR signals change with the seasons

31. Why is fixation the most dangerous scan error?

A. Because it improves precision on the fixated instrument

B. Because it affects only the magnetic compass

C. Because it eliminates the need for trim

D. Because while perfecting one parameter, the aircraft diverges in others unnoticed

32. Why does a SID exist primarily to organize traffic flow rather than guarantee obstacle clearance?

A. Because SIDs are flown only at the pilot's discretion

B. Because SIDs never provide any obstacle clearance

C. Because its purpose is to simplify clearance delivery and manage departing traffic efficiently

D. Because SIDs are always textual procedures

33. Why must a pilot verify the Morse code identifier of a localizer before using it?

A. Because the identifier sets the decision altitude automatically

B. Because the identifier indicates the runway length

C. Because an off-air or misidentified facility would feed false guidance

D. Because the identifier reveals the glide slope angle

34. Why does converging temperature and dew point on a calm, cooling evening suggest fog?

A. Because the narrowing spread means the air is approaching saturation

B. Because convergence indicates rising convective air

C. Because a small spread always produces thunderstorms

D. Because converging values indicate strong winds aloft

35. Why must a pilot slow to holding speed before reaching the holding fix?

A. Because exceeding holding speed can carry the aircraft outside the protected airspace

B. Because slowing resets the transponder code

C. Because it converts the hold to a nonstandard pattern

D. Because it changes the inbound leg timing automatically

36. Why does the attitude indicator function as the supporting, not primary, instrument for pitch in level flight?

A. Because the attitude indicator is never used in instrument flight

B. Because the altimeter most directly shows the objective of holding altitude

C. Because the vertical speed indicator is always primary for pitch

D. Because the attitude indicator is primary only for power

37. Why is "ducking under" the MDA without visual references dangerous on a non-precision approach?

A. Because it descends the aircraft below the altitude that guarantees obstacle clearance

B. Because it exceeds the maximum holding airspeed

C. Because it triggers an automatic transponder code change

D. Because it places the aircraft into a nonstandard hold

38. Why does a glide slope needle deflected above center indicate the pilot should reduce the descent?

A. Because the localizer has failed and lateral guidance is lost

B. Because the aircraft has passed the missed approach point

C. Because the glide path is above the aircraft, meaning the aircraft is below it

D. Because the needle reverses sense near the runway

39. Why does the lost-communication route rule prioritize the assigned route first?

A. Because the pilot may freely choose any efficient route

B. Because the filed route always takes precedence over assignments

C. Because the nearest airport must always be the destination

D. Because flying the last-assigned route keeps the aircraft predictable to ATC

40. Why does a non-WAAS GPS generally limit a pilot to LNAV minimums on an RNAV approach?

A. Because LNAV provides vertical guidance that WAAS cannot

B. Because non-WAAS receivers cannot fly any RNAV approach

C. Because without WAAS corrections, vertical guidance to LPV minimums is unavailable

D. Because LNAV minimums are always lower than LPV minimums

41. Why is a position report required over a compulsory reporting point in a non-radar environment?

A. Because the transponder is inoperative in non-radar airspace

B. Because the pilot must request a new clearance at each point

C. Because ATC cannot see the aircraft, so the report maintains awareness of its position

D. Because the point marks a mandatory descent

42. Why does an aircraft with an inoperative required instrument generally remain unairworthy for IFR until addressed?

A. Because any inoperative instrument is acceptable if logged

B. Because VMC weather always permits the flight

C. Because the alternate static source replaces the instrument

D. Because required equipment must be operative or properly handled under the MEL or deactivate-and-placard process

43. Why does flight visibility, not just the MDA, govern whether a landing may be made?

A. Because the MDA alone permits a landing regardless of visibility

B. Because the pilot must both meet the visibility minimum and see a required visual reference

C. Because flight visibility is irrelevant once the MDA is reached

D. Because the decision altitude replaces the visibility requirement

44. Why does briefing the approach early reduce risk?

A. Because it preserves reserve mental capacity for the high-workload final phase

B. Because it eliminates the requirement to fly a missed approach

C. Because it guarantees the weather stays above minimums

D. Because it allows skipping the approach chart entirely

45. Why are personal minimums set in advance on the ground rather than decided in the air?

A. Because they replace the legal weather minimums entirely

B. Because they permit descent below published approach minimums

C. Because setting them in calm conditions removes in-the-moment pressure from the decision

D. Because they eliminate the need for a weather briefing

46. Why does a Convective SIGMET imply severe turbulence and icing beyond the thunderstorms it names?

A. Because it applies only to light aircraft and inexperienced pilots

B. Because it concerns only mountain obscuration

C. Because thunderstorms inherently carry these severe associated hazards

D. Because it reports only routine surface wind shifts

47. Why does the standard weather briefing begin with adverse conditions?

A. Because adverse conditions list the assigned transponder code

B. Because hazards that might alter or cancel the flight should be presented first

C. Because the synopsis must always come last

D. Because adverse conditions provide the fuel reserve

48. Why does a VOR indication remain the same regardless of the aircraft's heading?

A. Because the CDI reverses with every heading change

B. Because the OBS automatically follows the heading

C. Because the TO/FROM flag is driven by heading

D. Because the indication depends on the aircraft's position relative to the station

49. Why is the cross-check the foundation of all attitude instrument flying?

A. Because it allows the pilot to fixate on the most important instrument

B. Because it replaces the need for trim

C. Because it lets a single instrument drive the aircraft

D. Because it continuously integrates the instruments into one accurate mental picture

50. Why must an ODP be reviewed and flown at a non-towered airport in low visibility?

A. Because ATC always provides radar vectors for terrain there

B. Because no controller is watching the terrain ahead, so the ODP guarantees obstacle clearance

C. Because the ODP organizes high-density traffic flow

D. Because the STAR provides the same protection

51. Why does emergency authority allow the pilot in command to deviate from any rule?

A. Because it applies to any inconvenience to save time

B. Because it transfers command to the controller

C. Because it permits routine shortcuts on every flight

D. Because the pilot must be able to do what safety demands without first seeking permission

52. Why does the localizer provide more precise lateral guidance than a VOR radial?

A. Because the localizer also provides vertical guidance

B. Because the VOR is used only for approaches

C. Because the localizer ignores crosswind effects

D. Because the localizer course is narrower and more sensitive than a VOR radial

53. Why must the heading indicator be periodically reset to the magnetic compass?

A. Because the compass drifts and the heading indicator corrects it

B. Because the heading indicator reads bearing to a VOR

C. Because the heading indicator drifts over time and the compass is reliable in steady flight

D. Because the compass requires vacuum power that the heading indicator supplies

54. Why is a current pilot not necessarily a proficient pilot?

A. Because currency and proficiency are identical concepts

B. Because currency is a regulatory recency minimum while proficiency is actual flying ability

C. Because proficiency expires every 24 months like a written test

D. Because a current pilot can never be rusty

55. Why does the instrument approach culminate in a decision at the DA or MAP?

A. Because the approach can always be continued regardless of conditions

B. Because the pilot must descend below minimums to find the runway

C. Because the pilot must either have the required references to land or go missed

D. Because the missed approach is optional once at minimums

56. Why does a STAR simplify operations into a busy terminal area?

A. Because it guarantees obstacle clearance on departure

B. Because it replaces the instrument approach entirely

C. Because it provides a charted, preplanned arrival that organizes traffic and reduces communication

D. Because it serves as a course reversal at the destination

57. Why does the airspeed indicator alone respond to a pitot blockage while the altimeter and VSI do not?

A. Because the airspeed indicator is the only instrument fed by the pitot source

B. Because the altimeter and VSI share the pitot source with the airspeed indicator

C. Because the airspeed indicator uses the static source only

D. Because the pitot blockage affects all three instruments equally

58. Why must a pilot avoid abrupt head movements during turns in IMC?

A. Because abrupt head movement can trigger the disorienting Coriolis illusion

B. Because head movement resets the heading indicator

C. Because it changes the aircraft's center of gravity

D. Because it interferes with the radio reception

59. Why does the FAA test candidates against figures in a separate testing supplement?

A. Because the figures are too large to print in the question

B. Because the supplement replaces the need to read charts

C. Because chart symbology is not tested on the exam

D. Because reading charts and figures is itself a tested instrument skill

60. Why does converging the temperature–dew point spread indicate approaching cloud or fog?

A. Because a converging spread means strong winds aloft

B. Because a small spread means the air is near saturation, the point at which moisture condenses

C. Because converging values indicate an unstable lapse rate

D. Because the spread converging always produces thunderstorms

Answer Key

1. B — When the pitot tube and its drain hole are both blocked, trapped pressure in the line can no longer respond to ram air, so the instrument responds only to changes in static pressure and behaves like an altimeter. It rises in a climb and falls in a descent. The static system remaining clear is what allows this altimeter-like behavior.

2. A — The attitude indicator and turn coordinator are powered by different sources so a single power-source failure cannot remove all attitude information at once. A vacuum failure leaves the electric turn coordinator; an electrical failure leaves the vacuum attitude indicator. This redundancy preserves partial-panel capability.

3. A — DME measures slant range — the straight-line distance from the aircraft to the station — so directly overhead it displays the altitude above the station rather than zero. The station does not stop transmitting, and no fixed offset is added. The slant-range geometry explains the non-zero overhead reading.

4. B — The localizer course narrows and becomes more sensitive as the runway is approached, so the same displacement produces greater needle movement and demands smaller corrections. The glide slope does not override lateral guidance, and the signal does not weaken. Increasing sensitivity is the reason for finer corrections.

5. D — A high-pressure system features descending, diverging air that warms and dries, generally producing stable air and fair weather. It does not have rising, cooling air, and its fair weather is not a function of where it forms. The descending air is the physical reason.

6. D — The mature stage is most hazardous because updrafts and downdrafts coexist with hail, lightning, and severe turbulence. The cumulus stage has building updrafts only, and the dissipating stage is dominated by weakening downdrafts. The coexistence of opposing drafts and severe phenomena defines the mature stage.

7. C — Datalink NEXRAD must not be used for close-in avoidance because processing and transmission latency make the displayed image lag the storm's real position by several minutes. It does detect precipitation, is not altitude-restricted, and the problem is staleness, not refresh speed. Latency is the core reason.

8. A — The 45-minute IFR reserve is always required because the regulation sets it as a fixed minimum for instrument operations, regardless of weather. It does not replace the alternate requirement, drop to 30 minutes, or apply only at night. It is a fixed floor.

9. A — The magnetic compass becomes unreliable during turns and acceleration because of magnetic dip, which produces the turning and acceleration errors (UNOS and ANDS). It does not lose vacuum power (it needs none), and variation does not change during a turn. Dip is the root cause of the dynamic errors.

10. C — The inbound leg is timed because it must be a consistent standard length, making it the controlled leg, with the outbound leg adjusted to compensate. It is affected by wind, and timing the outbound leg is not prohibited. Controlling the inbound leg keeps the pattern consistent within protected airspace.

11. B — Selecting the alternate static source in an unpressurized cabin makes the altimeter read slightly high because cabin static pressure is slightly lower than the outside static pressure. The alternate source does not feed ram air or cut power. The lower cabin pressure produces the predictable high reading.

12. D — A procedure turn is not flown under radar vectors to final because the vectors already position the aircraft to intercept the final approach course directly. Procedure turns are not categorically prohibited in radar environments, and the glide slope is not the reason. Being positioned to intercept makes the reversal unnecessary.

13. A — WAAS enables vertically guided approaches because ground stations measure GPS errors and broadcast corrections that sharpen accuracy and integrity. It does not provide inertial reference, link to ground ILS, or reduce required satellites to two. The broadcast corrections are what unlock vertical guidance.

14. A — Structural icing requires both visible moisture and a freezing temperature because ice forms when supercooled liquid water freezes on contact with the airframe. Dry sub-freezing air lacks the water, and moisture above freezing does not freeze on contact. Both conditions must coexist for icing.

15. B — The EFC time matters in a lost-communication hold because it tells the pilot when to leave the holding fix and proceed per the clearance. It does not set holding speed, the transponder code, or leg length. Its lost-communication role makes it more than informational.

16. A — Aviate precedes communicate because maintaining aircraft control must come before any other action. Communicating does not restore instruments, ATC need not be told before flying, and navigation does not precede control. Control of the aircraft is always first.

17. D — The 1-2-3 rule applies to the destination because it decides whether an alternate is needed at all, based on the destination forecast. It does not set the alternate's landing visibility or the alternate-leg fuel. The destination forecast drives the alternate-required decision.

18. A — The turn coordinator is usually retained after a vacuum failure because it is typically driven by the electrical system, not the vacuum system. It does not share the vacuum source or run on ram air, and it does require power. Its separate electrical power is why it survives.

19. C — A cold front produces more violent but shorter-lived weather because it forces warm air up steeply, concentrating weather into a narrow band of showers or thunderstorms. It moves faster, not slower, and produces cumuliform, not only stratiform, clouds. The steep lifting concentrates the weather.

20. B — A pilot must trust the instruments in IMC because the vestibular and somatosensory systems produce false sensations without a visual horizon. Bodily sensations are not merely slower — they are actively wrong, and instruments are not immune to all failures but are objective when working. Physiology, not regulation, is the reason.

21. D — A temperature inversion reduces visibility because it acts as a lid, trapping moisture, haze, and pollutants beneath it. It suppresses, rather than produces, convective mixing and does not force moisture upward or increase the spread. The trapping effect is the mechanism.

22. D — The MOCA is equal to or lower than the MEA because it relaxes the signal-coverage requirement, guaranteeing reception only within 22 NM of the VOR while still ensuring obstacle clearance. It does not guarantee more coverage or a higher obstacle margin, and the MEA does not ignore obstacles. The relaxed coverage requirement allows the lower altitude.

23. A — Filing a preferred IFR route increases the chance of "as filed" because preferred routes are designed to organize traffic flow, so ATC issues them readily. They are not always shortest, filing any route does not guarantee it, and they do not bypass controlled airspace. Their traffic-flow design is why they are cleared readily.

24. B — The pilot must close an IFR flight plan at a non-towered airport because no tower is present to observe the landing and close it. The flight plan does not convert to VFR, and no new flight plan is filed for closure. The absence of a tower shifts the responsibility to the pilot.

25. D — The standard inbound holding leg lengthens to 1.5 minutes above 14,000 feet because the regulation sets a longer standard leg time in that altitude band. It is not due to crosswinds, DME holding, or a speed decrease (speed actually increases). The rule simply specifies the longer leg above 14,000 feet.

26. B — An instrument rating does not expire because it is permanent on the certificate; only currency must be maintained. It requires no 24-month renewal or re-test, and it does not convert to a private certificate. What lapses is the legal right to use it without re-establishing currency.

27. C — RNP differs fundamentally from basic RNAV because it adds on-board performance monitoring and alerting. It can use GPS, navigates to a defined (often higher) accuracy, and is not ground-navaid-only. The monitoring-and-alerting capability is the defining difference.

28. C — Spatial disorientation affects even skilled pilots because the illusions are products of normal human physiology. It is not limited to fatigued pilots, cannot be eliminated by concentration, and skilled pilots do not ignore instruments. The physiological basis is why everyone is susceptible.

29. B — In a nose-low recovery, the wings must be leveled before raising the nose because pulling while banked tightens the descending spiral and overstresses the airframe. Raising the nose first does not regain airspeed safely, the bank does matter, and power is reduced, not added. Roll first, then recover pitch.

30. B — The VOR check is required every 30 days because navigation precision can drift and must be verified frequently, unlike the slower-changing altimeter system. VOR receivers are not less important, the check is not optional, and signals do not change seasonally. Frequent drift verification is the reason for the short cycle.

31. D — Fixation is the most dangerous scan error because, while perfecting one parameter, the aircraft diverges in others unnoticed. It does not genuinely improve precision, affects more than the compass, and does not eliminate trim. The unnoticed divergence is the hazard.

32. C — A SID exists primarily to organize traffic flow because its purpose is to simplify clearance delivery and manage departing traffic efficiently. It is ATC-assigned (not pilot-discretion), may provide some obstacle clearance, and is graphic. Its traffic-management purpose distinguishes it from the obstacle-focused ODP.

33. C — Verifying the localizer's Morse identifier matters because an off-air or misidentified facility would feed false guidance. The identifier does not set the DA, indicate runway length, or reveal the glide slope angle. Positive identification confirms the correct, operating facility.

34. A — Converging temperature and dew point on a calm, cooling evening suggests fog because the narrowing spread means the air is approaching saturation. Convergence does not indicate rising convective air, thunderstorms, or strong winds aloft. Near-saturation in calm, cooling conditions favors radiation fog.

35. A — Slowing to holding speed before the fix matters because exceeding it can carry the aircraft outside the protected airspace, especially in the turns. It does not reset the transponder, change the pattern to nonstandard, or alter timing. Protected-airspace integrity is the reason.

36. B — The attitude indicator is supporting, not primary, for pitch in level flight because the altimeter most directly shows the objective of holding altitude. The attitude indicator is used (it is the control instrument), the VSI is not always primary, and it is not primary for power. The primary instrument is whichever confirms the objective.

37. A — "Ducking under" the MDA without visual references is dangerous because it descends the aircraft below the altitude that guarantees obstacle clearance. It does not exceed holding speed, change the transponder, or create a nonstandard hold. Loss of obstacle protection is the hazard.

38. C — A glide slope needle deflected above center indicates the glide path is above the aircraft, meaning the aircraft is below it, so the pilot reduces the descent to recapture the path. It does not indicate a localizer failure, passing the MAP, or reverse sensing. Fly toward the needle: needle high means fly up.

39. D — The lost-communication route rule prioritizes the assigned route first because flying the last-assigned route keeps the aircraft predictable to ATC. The pilot does not choose freely, the filed route is lower priority, and the nearest airport is not automatically the destination. Predictability is the governing principle.

40. C — A non-WAAS GPS generally limits the pilot to LNAV minimums because, without WAAS corrections, vertical guidance to LPV minimums is unavailable. LNAV is lateral only (not vertical), non-WAAS receivers can fly RNAV approaches, and LNAV minimums are higher, not lower, than LPV. The missing WAAS corrections constrain the achievable minimums.

41. C — A position report over a compulsory point in a non-radar environment is required because ATC cannot see the aircraft, so the report maintains awareness of its position. The transponder is not inoperative, no new clearance is requested at each point, and the point is not a mandatory descent. The report substitutes for radar surveillance.

42. D — An aircraft with an inoperative required instrument is unairworthy for IFR until addressed because required equipment must be operative or properly handled under the MEL or deactivate-and-placard process. Merely logging it, VMC weather, or the alternate static source do not legalize the flight. The item must be properly addressed.

43. B — Flight visibility, not just the MDA, governs a landing because the pilot must both meet the visibility minimum and see a required visual reference. The MDA alone does not permit a landing, visibility is not irrelevant, and the DA does not replace the visibility requirement. Both conditions are necessary.

44. A — Briefing the approach early reduces risk because it preserves reserve mental capacity for the high-workload final phase. It does not eliminate the missed approach, guarantee weather, or allow skipping the chart. Preserving capacity is the benefit.

45. C — Personal minimums are set in advance because doing so in calm conditions removes in-the-moment pressure from the decision. They do not replace legal minimums, permit descent below published minimums, or eliminate the briefing. Pre-setting them protects the in-flight decision.

46. C — A Convective SIGMET implies severe turbulence and icing because thunderstorms inherently carry these severe associated hazards, along with low-level wind shear. It applies to all aircraft, not just

light ones, and concerns more than mountain obscuration or wind shifts. The thunderstorm's inherent hazards are why they are implied.

47. B — The standard briefing begins with adverse conditions because hazards that might alter or cancel the flight should be presented first. Adverse conditions do not contain the transponder code or fuel reserve, and the synopsis is not last for this reason. Leading with hazards ensures they are not missed.

48. D — A VOR indication remains the same regardless of heading because it depends on the aircraft's position relative to the station, not its heading. The CDI does not reverse with heading, the OBS does not follow heading, and the TO/FROM flag is not heading-driven. Position, not heading, determines the radial.

49. D — The cross-check is the foundation of attitude instrument flying because it continuously integrates the instruments into one accurate mental picture. It is not about fixating on one instrument, replacing trim, or letting a single instrument drive the aircraft. Integration of all the instruments is its purpose.

50. B — An ODP must be reviewed and flown at a non-towered airport in low visibility because no controller is watching the terrain ahead, so the ODP guarantees obstacle clearance. ATC does not always provide vectors there, the ODP is not for traffic flow, and a STAR does not serve departures. The pilot's terrain safeguard is the ODP.

51. D — Emergency authority allows deviation from any rule because the pilot must be able to do what safety demands without first seeking permission. It is not for inconvenience or routine shortcuts and does not transfer command to the controller. It exists for genuine emergencies requiring immediate action.

52. D — The localizer provides more precise lateral guidance than a VOR radial because its course is narrower and more sensitive. It does not provide vertical guidance (that is the glide slope), the VOR is not approach-only, and the localizer does not ignore crosswind. The narrower, more sensitive course is the reason.

53. C — The heading indicator must be reset to the compass because the heading indicator drifts over time and the magnetic compass is reliable in steady, unaccelerated flight for resetting it. The compass does not drift in that sense, the heading indicator does not read VOR bearing, and the compass needs no vacuum power. Gyro drift plus compass reliability in steady flight is the reason.

54. B — A current pilot is not necessarily proficient because currency is a regulatory recency minimum while proficiency is actual flying ability. The two are not identical, proficiency does not expire on a fixed schedule, and a current pilot can be rusty. The distinction between legal recency and real skill is the point.

55. C — The approach culminates in a decision because, at the DA or MAP, the pilot must either have the required references to land or go missed. The approach cannot always be continued, the pilot may not descend below minimums to search, and the missed approach is not optional when references are absent. The land-or-go-missed decision is the point of the approach.

56. C — A STAR simplifies operations into a busy terminal area because it provides a charted, preplanned arrival that organizes traffic and reduces communication. It does not guarantee departure obstacle clearance, replace the approach, or serve as a course reversal. Its preplanned arrival structure is the benefit.

57. A — Only the airspeed indicator responds to a pitot blockage because it is the only instrument fed by the pitot source; the altimeter and VSI use static pressure only. The altimeter and VSI do not share the pitot source, and a pitot blockage does not affect all three equally. The unique pitot connection explains the isolated effect.

58. A — Abrupt head movements during turns in IMC must be avoided because they can trigger the disorienting Coriolis illusion, which abruptly stimulates multiple semicircular canals. Head movement does not reset the heading indicator, shift the center of gravity meaningfully, or interfere with radio reception. The Coriolis illusion is the reason.

59. D — The FAA tests candidates against supplement figures because reading charts and figures is itself a tested instrument skill. The figures are not merely too large to print, the supplement does not replace chart reading, and chart symbology is very much tested. Chart interpretation is a core competency the exam assesses.

60. B — A converging temperature–dew point spread indicates approaching cloud or fog because a small spread means the air is near saturation, the point at which moisture condenses. It does not indicate strong winds aloft, an unstable lapse rate, or thunderstorms. Near-saturation is the condition for condensation.