PRACTICE EXAM 17 (60 QUESTIONS)

1. When two aircraft are converging at the same altitude under IFR in IMC, separation is ensured by:

A. The pilots visually acquiring and avoiding each other

B. A standard right-of-way turn made by both aircraft

C. Each aircraft squawking a discrete transponder code

D. Air traffic control providing positive separation between them

2. A "contact approach" may be initiated only when:

A. The control tower instructs the pilot to remain visual

B. The pilot requests it and has at least 1 mile visibility clear of clouds

C. The weather is reported at or above basic VFR minimums

D. The aircraft is being radar vectored to the final approach course

3. The holding speed limit at or below 6,000 feet MSL is a maximum of:

A. 200 knots indicated airspeed

B. 230 knots indicated airspeed

C. 175 knots indicated airspeed

D. 265 knots indicated airspeed

4. A pilot inadvertently flies into known icing without anti-ice equipment. The most appropriate immediate action is to:

A. Exit the icing conditions by changing altitude or course

B. Increase airspeed to prevent ice from adhering to the wings

C. Reduce power to lower the airframe temperature gradually

D. Continue on course since light icing is rarely hazardous

5. The decision height on a Category I ILS approach is typically:

A. 100 feet above the touchdown zone elevation

B. 50 feet above the runway threshold elevation

C. 200 feet above the touchdown zone elevation

D. 300 feet above the airport reference point

6. A METAR reporting "10SM FEW250" indicates conditions that are:

A. Marginal VFR requiring special handling

B. Below IFR landing minimums at most airports

C. Obscured with vertical visibility restrictions

D. Well above VFR minimums with high scattered cloud

7. When a pilot is unable to comply with an ATC clearance, the correct action is to:

A. Comply as closely as possible and report the deviation later

B. Advise ATC "unable" and request an alternative clearance

C. Continue on the present course without acknowledging

D. Declare an emergency and squawk 7700 immediately

8. The primary purpose of an instrument approach procedure's "intermediate segment" is to:

A. Provide the final descent to the runway threshold

B. Allow the aircraft to slow and configure while aligning for final

C. Establish the missed approach holding pattern

D. Transition the aircraft from the en route structure to the IAF

9. A pilot experiences vacuum system failure in IMC. To maintain heading without the directional gyro, the pilot should use:

A. The vertical speed indicator and altimeter together

B. The attitude indicator's heading reference markings

C. The magnetic compass with appropriate turn timing

D. The GPS groundspeed readout for directional control

10. A "circling approach" is required when:

A. The ceiling is too low for any straight-in landing

B. The pilot prefers to land with a tailwind component

C. The final approach course is not aligned with a usable runway

D. The aircraft must hold before commencing the approach

11. Under IFR, a "cruise clearance" to an altitude authorizes the pilot to:

A. Maintain only the top altitude stated in the clearance

B. Climb above the assigned altitude at the pilot's discretion

C. Fly at any speed without regard to airspace limits

D. Use any altitude from the minimum IFR altitude up to the assigned altitude

12. Convective turbulence beneath a developing cumulus cloud is caused primarily by:

A. Wind shear from an approaching cold front aloft

B. Rising thermals and vertical air currents in unstable air

C. Friction between the cloud base and the terrain below

D. The release of latent heat during precipitation formation

13. A pilot must report reaching a holding fix to ATC by stating the time and altitude when:

A. Operating in a radar environment with continuous monitoring

B. In a non-radar environment or when specifically requested

C. The aircraft is established on the inbound holding course

D. The expect-further-clearance time has already passed

14. The "minimum vectoring altitude" (MVA) used by controllers is:

A. Always identical to the minimum en route altitude

B. The lowest altitude depicted on the IFR en route chart

C. Published on approach charts for pilot reference

D. The lowest altitude at which radar vectors ensure obstacle clearance

15. A pilot notices the airspeed indicator reads zero shortly after takeoff into IMC. The most likely cause is:

A. A failure of the attitude indicator gyroscope

B. A blocked static port affecting the instrument

C. A blocked or obstructed pitot tube ram-air inlet

D. An electrical failure of the airspeed display

16. When ATC issues "hold for release," the pilot must:

A. Remain on the ground until receiving a release time or clearance

B. Enter a holding pattern over the departure airport immediately

C. Depart at the pilot's discretion within the next 30 minutes

D. Contact the destination tower before beginning the flight

17. A pilot flying an approach observes the runway environment in sight but is above the visual glidepath at the visual descent point. The pilot should:

A. Descend rapidly to intercept the normal glidepath below

B. Continue at the current altitude until over the threshold

C. Add power and extend the approach to lose altitude slowly

D. Consider executing a go-around if a stabilized approach is not assured

18. The standard temperature and pressure at sea level in the ISA are:

A. 0°C and 29.92 inches of mercury at the surface

B. 20°C and 30.00 inches of mercury at the surface

C. 59°F and 28.92 inches of mercury at the surface

D. 15°C and 29.92 inches of mercury at the surface

19. A pilot is cleared for a "visual approach" behind preceding traffic. The pilot accepts responsibility for:

A. Maintaining the published glideslope to the runway

B. Visual separation from and following the preceding aircraft

C. Providing wake turbulence advisories to following traffic

D. Navigating the published missed approach if needed

20. The maximum airspeed for holding at altitudes above 14,000 feet MSL is:

A. 265 knots indicated airspeed

B. 230 knots indicated airspeed

C. 200 knots indicated airspeed

D. 175 knots indicated airspeed

21. A pilot encountering severe turbulence should report it to ATC because severe turbulence:

A. Has no effect on other aircraft in the vicinity

B. Is a routine condition not requiring any report

C. Causes large, abrupt changes in altitude and attitude

D. Only affects aircraft heavier than the reporting aircraft

22. The required visibility for a contact approach is at least:

A. 3 statute miles with a 1,000-foot ceiling reported

B. 5 statute miles and clear of all cloud layers

C. 2 statute miles regardless of the reported ceiling

D. 1 statute mile and the aircraft clear of clouds

23. A pilot flying at the MEA loses navigation signal at a "MEA gap." The pilot should:

A. Immediately climb to the maximum authorized altitude

B. Continue using dead reckoning until signal is reacquired

C. Request radar vectors and abandon the route entirely

D. Descend below the MEA to regain ground-based reception

24. The "transition altitude" in U.S. operations, above which 29.92 is set, is generally:

A. 18,000 feet MSL, the base of the flight levels

B. 10,000 feet MSL for all turbine aircraft

C. 14,500 feet MSL within controlled airspace

D. 24,000 feet MSL for high-altitude operations

25. A pilot must possess current charts for an instrument approach because:

A. Older charts display more detailed terrain information

B. Procedures, frequencies, and minimums change over time

C. Current charts are required only for international flights

D. Expired charts are illegal to carry aboard any aircraft

26. When the inclinometer ball is to the right during a right turn, the aircraft is in a:

A. Coordinated turn with balanced forces

B. Slipping turn requiring less bank angle

C. Skidding turn requiring less rudder pressure

D. Stalled condition requiring immediate recovery

27. A "DH" and a "DA" both represent decision points, but a DA is referenced to:

A. Height above the touchdown zone elevation directly

B. The radio altimeter reading at the threshold

C. Mean sea level using the barometric altimeter

D. The airport's published field elevation only

28. A pilot planning IFR notes the destination has only one approach, an ILS, and the glideslope is NOTAM'd out of service. The pilot should plan to:

A. Fly the ILS ignoring the inoperative glideslope notice

B. Cancel the entire flight as no approach is available

C. Use the visual approach regardless of the weather

D. Fly the localizer-only approach to the higher LOC minimums

29. Frost, snow, or ice on the wings must be removed before flight because contamination:

A. Adds weight that the engine cannot overcome on climb

B. Affects only the appearance and not the performance

C. Disrupts airflow and degrades lift and stall margins

D. Reduces drag and causes the aircraft to climb too steeply

30. When a controller issues "climb and maintain 7,000, report leaving 5,000," the pilot should report:

A. Upon passing through 5,000 feet during the climb

B. Only after reaching the assigned altitude of 7,000

C. When the aircraft first begins its climb from the runway

D. At each 1,000-foot interval during the entire climb

31. A pilot determines the wind correction angle and finds a strong left crosswind on final. To track the localizer centerline, the pilot must:

A. Allow the aircraft to drift right of the centerline

B. Reduce the bank angle to slow the rate of correction

C. Apply right rudder continuously to hold the heading

D. Crab into the wind by turning the nose to the left

32. The "minimum reception altitude" (MRA) on an airway is the lowest altitude at which:

A. The aircraft is guaranteed radar coverage on the route

B. Obstacle clearance is provided along the entire segment

C. An intersection can be determined using navigation signals

D. The pilot may cancel IFR and proceed under visual rules

33. A pilot in a holding pattern with a 30-knot crosswind must apply drift correction so that:

A. Both the inbound and outbound legs use the same heading

B. The inbound leg ignores wind and the outbound corrects fully

C. The outbound leg uses triple the inbound drift correction

D. The aircraft remains within the protected holding airspace

34. Hypoxia symptoms can be insidious because the affected pilot often experiences:

A. A false sense of well-being and impaired self-assessment

B. Sharp physical pain alerting them to the problem immediately

C. An immediate and obvious loss of all motor function

D. Enhanced judgment and quicker decision-making ability

35. A pilot is cleared for an approach with a published procedure turn but is being radar vectored to the final approach course. The pilot should:

A. Fly the procedure turn regardless of the vectors given

B. Request permission to fly the procedure turn anyway

C. Begin the procedure turn after crossing the IAF inbound

D. Not fly the procedure turn unless specifically instructed to

36. The wind reported in a METAR is referenced to:

A. Magnetic north as read from the airport compass rose

B. The runway heading currently in use for landing

C. True north in degrees with the velocity in knots

D. The pilot's magnetic heading on the final approach

37. A pilot flying a non-precision approach reaches the MDA early and the runway is not yet in sight. The pilot should:

A. Maintain the MDA until the missed approach point or runway is seen

B. Descend below the MDA to search for the runway environment

C. Begin a climbing turn toward the missed approach fix at once

D. Circle at the MDA until receiving further ATC instructions

38. The autopilot's "yaw damper" function primarily serves to:

A. Maintain the selected altitude during turbulence penetration

B. Control the pitch attitude during climbs and descents

C. Reduce unwanted yawing motions such as Dutch roll

D. Capture and track the localizer course on approach

39. A "compulsory reporting point" on an IFR chart requires a position report when:

A. The flight is operating within continuous radar coverage

B. The pilot is established in a published holding pattern

C. Operating in a non-radar environment over that point

D. The aircraft is below the minimum en route altitude

40. A pilot encountering a thunderstorm should avoid flying beneath it because of the hazard of:

A. Improved visibility leading to spatial disorientation

B. Severe wind shear, downdrafts, and microburst activity

C. Excessive engine cooling from the heavy rainfall

D. Reduced fuel consumption tempting a longer route

41. The "off-route obstruction clearance altitude" (OROCA) provides:

A. Navigation signal coverage guaranteed throughout the grid

B. Radar vectoring altitudes assigned by the controller

C. Obstruction clearance within a latitude/longitude grid block

D. The lowest altitude for filing an IFR flight plan direct

42. A pilot notices the heading indicator has precessed 15 degrees over 20 minutes of flight. This is:

A. A sign of imminent gyroscope failure requiring landing

B. Caused by a blockage in the pitot-static system

C. An indication the magnetic compass is unreliable

D. Normal precession requiring periodic realignment to the compass

43. When ATC clears a flight to descend "via the ARRIVAL," the pilot complies with:

A. Only the lateral path, descending solely on later ATC instruction

B. The published lateral path and all altitude restrictions on the arrival

C. The lowest published altitude immediately without restriction

D. The altitude restrictions but may deviate laterally as needed

44. A pilot must use supplemental oxygen above 14,000 feet cabin pressure altitude because:

A. The reduced oxygen partial pressure causes hypoxic hypoxia

B. The cabin pressure forces nitrogen out of the bloodstream

C. Carbon monoxide concentrations increase at that altitude

D. The temperature drop impairs the pilot's circulation

45. A localizer provides course guidance with a sensitivity that, compared to a VOR, is:

A. Identical in angular width to a standard VOR course

B. Less sensitive, providing a wider course near the runway

C. Variable depending on the distance from the station only

D. More sensitive, with a narrower full-scale deflection

46. A pilot flying in IMC notices the turn coordinator shows a left turn while the heading indicator and compass indicate a steady heading. The most likely problem is:

A. The aircraft is in a coordinated standard-rate left turn

B. A failure or malfunction of the turn coordinator instrument

C. A blocked static port affecting the turn coordinator

D. Normal precession of the turn coordinator gyroscope

47. The purpose of a "feeder route" altitude on an approach chart is to:

A. Guarantee obstacle clearance from the en route fix to the IAF

B. Provide the final descent gradient to the runway threshold

C. Establish the circling minimums for the procedure

D. Mark the visual descent point on the final approach segment

48. A pilot must report "leaving" an assigned altitude to ATC when:

A. Departing a previously assigned altitude in a radar environment

B. Only when operating in a non-radar environment

C. Reaching the newly assigned altitude after the change

D. Passing each compulsory reporting point on the route

49. Spatial disorientation is exacerbated by which physiological condition?

A. Adequate rest and proper hydration before the flight

B. A clearly visible natural horizon during the maneuver

C. Frequent reference to the flight instruments while flying

D. Fatigue, stress, or illness affecting the pilot's perception

50. A "STAR" (Standard Terminal Arrival Route) is designed primarily to:

A. Provide obstacle clearance during the missed approach

B. Establish holding patterns for departing aircraft

C. Transition arriving aircraft from en route to the approach environment

D. Replace the need for an instrument approach procedure

51. A pilot must determine the lowest usable altitude for an off-airway direct route. The controlling figure is the:

A. Minimum en route altitude of the nearest published airway

B. Minimum vectoring altitude used by the local controller

C. Standard service volume of the nearest VOR station

D. Off-route obstruction clearance altitude for the grid block

52. The danger of accepting a "slam-dunk" descent (a late, steep descent clearance) is that it may:

A. Make a stabilized approach difficult to achieve

B. Improve the aircraft's fuel efficiency significantly

C. Reduce the workload during the approach phase

D. Eliminate the need to brief the approach procedure

53. A pilot flying an ILS must monitor the localizer identification to confirm:

A. The correct localizer is tuned and the signal is reliable

B. The glideslope angle matches the published value exactly

C. The runway lighting system is currently operational

D. The decision height has been correctly set on the radio altimeter

54. When the controller assigns "maintain maximum forward speed," the pilot should:

A. Exceed the aircraft's certificated airspeed limitations briefly

B. Fly as fast as safely practical for the configuration

C. Reduce to the minimum clean airspeed for the aircraft

D. Maintain the current speed without any adjustment

55. Carburetor icing in an IFR flight is most likely under conditions of:

A. Very cold, dry air at high cruising altitudes

B. High humidity with temperatures from about 20°F to 70°F

C. Clear skies with low relative humidity at the surface

D. Temperatures well above 70°F regardless of the humidity

56. A pilot reaching the clearance limit with no further clearance and lost communications should:

A. Hold indefinitely at the limit until fuel becomes a factor

B. Climb to the maximum authorized altitude and proceed direct

C. Cancel IFR and descend to land at the nearest airport

D. Begin the approach at the EFC time or the filed ETA as applicable

57. A pilot reads back a clearance incorrectly and the controller does not catch the error. The responsibility for the readback error:

A. Rests solely with the controller who issued the clearance

B. Is shared, but the pilot must fly the clearance as actually issued

C. Falls entirely on the facility's quality assurance program

D. Is waived because the controller failed to correct it

58. A holding pattern's "non-holding side" refers to the area:

A. Inside the racetrack pattern where the aircraft turns

B. On the opposite side of the inbound course from the turns

C. Beyond the protected airspace boundary entirely

D. Where the expect-further-clearance time is calculated

59. A pilot transitioning from instrument flight to a visual landing at night over water or dark terrain should be especially alert for:

A. The black hole illusion causing a low approach

B. Excessive glare from the runway approach lighting

C. The autokinesis illusion from the runway centerline lights

D. Carburetor icing during the reduced-power descent

60. The primary reason an instrument-rated pilot must log approaches, holding, and course tracking for currency is to:

A. Maintain the proficiency needed for safe IFR operations

B. Satisfy insurance requirements for the aircraft operator

C. Qualify for an airline transport pilot certificate later

D. Demonstrate currency only for night visual operations

+ Answer Key

1. D — Under IFR in IMC, air traffic control provides positive separation between aircraft, since pilots cannot see to avoid one another. Separation is ATC's responsibility in controlled airspace. This is a defining feature of the IFR system in instrument conditions.

2. B — A contact approach may be initiated only at the pilot's request, with at least 1 statute mile visibility and the aircraft clear of clouds. It is never offered by ATC. The pilot must remain clear of clouds and navigate visually to the airport.

3. A — The maximum holding airspeed at or below 6,000 feet MSL is 200 knots indicated airspeed. Staying within the limit keeps the aircraft inside protected holding airspace. Higher bands apply at higher altitudes.

4. A — Inadvertent icing without anti-ice equipment calls for exiting the conditions by changing altitude or course to reach air that is warmer or free of visible moisture. Escaping the icing environment is the priority. Continuing in icing risks dangerous accumulation.

5. C — A Category I ILS decision height is typically 200 feet above the touchdown zone elevation. It marks the go/no-go point for the precision approach. Reaching DH without visual references requires a missed approach.

6. D — "10SM FEW250" reports 10 statute miles visibility and only a few clouds at 25,000 feet, conditions well above VFR minimums. There is no ceiling and excellent visibility. These are clearly favorable flying conditions.

7. B — When unable to comply with a clearance, the pilot advises ATC "unable" and requests an alternative. Clear communication lets the controller issue a workable clearance. Silently deviating or guessing creates a hazard.

8. B — The intermediate segment allows the aircraft to slow and configure while aligning for the final approach course. It bridges the initial and final segments. This sets up a stabilized descent on final.

9. C — With the directional gyro lost to vacuum failure, the pilot uses the magnetic compass with appropriate turn timing to maintain heading. Timed standard-rate turns compensate for compass errors during turns. This is a core partial-panel skill.

10. C — A circling approach is required when the final approach course is not aligned with a usable runway, requiring a maneuver to land. The misalignment necessitates circling to the landing runway. Circling minimums then apply.

11. D — A cruise clearance authorizes the pilot to fly at any altitude from the minimum IFR altitude up to and including the assigned altitude, and to execute an approach at the destination. It provides altitude flexibility within the block. Once the pilot reports leaving an altitude downward, it may not be reclaimed without a new clearance.

12. B — Convective turbulence beneath a developing cumulus is caused by rising thermals and vertical air currents in unstable air. The buoyant air produces the bumpy ride. This is typical of daytime heating and convective buildups.

13. B — A pilot reports reaching a holding fix with time and altitude in a non-radar environment or when specifically requested by ATC. Radar makes routine reports unnecessary. The report keeps ATC informed where radar cannot.

14. D — The minimum vectoring altitude is the lowest altitude at which radar vectors ensure obstacle clearance. It is used by controllers and not published on pilot charts. MVAs can be lower than MEAs because they rely on radar coverage.

15. C — An airspeed indicator reading zero after takeoff most likely indicates a blocked or obstructed pitot tube ram-air inlet. The pitot supplies the ram pressure the airspeed indicator needs. A blockage there removes the airspeed indication.

16. A — "Hold for release" requires the pilot to remain on the ground until receiving a release time or clearance. ATC uses it to manage IFR departures into the system. Departing without release would be a violation.

17. D — Being above the visual glidepath at the VDP with the runway in sight means a normal stabilized descent may not be achievable, so the pilot should consider a go-around if stabilization is not assured. Diving to recapture the path is unsafe. A stabilized approach is the standard.

18. D — The ISA standard sea-level conditions are 15°C and 29.92 inches of mercury. These reference values underlie altimetry and performance charts. Deviations from them affect true altitude and aircraft performance.

19. B — Accepting a visual approach behind preceding traffic makes the pilot responsible for visual separation from and following that aircraft. ATC transfers that separation duty to the pilot. The pilot also remains alert for wake turbulence.

20. A — The maximum holding airspeed above 14,000 feet MSL is 265 knots indicated airspeed. This is the highest band in the holding-speed structure. Observing it keeps the aircraft within protected airspace.

21. C — Severe turbulence is reported to ATC because it causes large, abrupt changes in altitude and attitude and may momentarily cause loss of control. The report warns other pilots and controllers. Sharing it improves safety for all traffic in the area.

22. D — A contact approach requires at least 1 statute mile visibility with the aircraft remaining clear of clouds. These are the minimum conditions for the pilot-requested procedure. The pilot navigates visually to the airport under these limits.

23. B — At an MEA gap where the navigation signal is lost, the pilot continues using dead reckoning until the signal is reacquired. The gap is a known, charted condition. Maintaining course by dead reckoning bridges the short signal loss.

24. A — In the United States, 18,000 feet MSL is the transition altitude above which the altimeter is set to 29.92, the base of the flight levels. Below it, the local altimeter setting is used. This standardizes altitude references in the high-altitude structure.

25. B — Current charts are required because procedures, frequencies, and minimums change over time, and outdated information could be unsafe. Amendments occur on a regular cycle. Flying an expired procedure risks using incorrect altitudes or courses.

26. C — A ball deflected to the right in a right turn indicates a skidding turn, with too much rudder for the bank, calling for less rudder pressure (or more bank). The ball moves to the outside of a skid. Centering it restores coordination.

27. C — A Decision Altitude is referenced to mean sea level using the barometric altimeter, whereas a Decision Height is referenced to height above the touchdown zone. The DA is read directly on the altimeter. This distinction affects how the pilot identifies the decision point.

28. D — With the glideslope NOTAM'd out of service, the pilot plans to fly the localizer-only approach to the higher LOC minimums. The localizer remains usable for lateral guidance. The non-precision minimums apply without the glideslope.

29. C — Wing contamination such as frost, snow, or ice disrupts airflow and degrades lift and stall margins, even in thin layers. The roughened surface spoils the boundary layer. All contamination must be removed before flight.

30. A — "Report leaving 5,000" directs the pilot to report upon passing through 5,000 feet during the climb. It gives ATC a specific progress check. The report is made as the aircraft departs that altitude.

31. D — A strong left crosswind on final requires crabbing into the wind by turning the nose to the left to track the localizer centerline. The crab offsets the wind drift. The pilot holds the centerline by adjusting the wind correction angle.

32. C — The minimum reception altitude is the lowest altitude at which an intersection can be determined using navigation signals. It ensures the fix-defining signals are receivable. It may be higher than the MEA where reception is the limiting factor.

33. D — Drift correction in a crosswind hold is applied so the aircraft remains within the protected holding airspace. Wind correction on both legs keeps the racetrack pattern from drifting outside the protected area. Proper correction maintains containment.

34. A — Hypoxia is insidious because the affected pilot often feels a false sense of well-being and cannot accurately self-assess. The euphoria masks the danger. This is why proactive oxygen use and altitude awareness are essential.

35. D — When being radar vectored to the final approach course, the pilot does not fly the procedure turn unless specifically instructed. The vectors position the aircraft for the intercept, replacing the course reversal. Flying an unexpected procedure turn could conflict with traffic.

36. C — METAR winds are referenced to true north in degrees, with velocity in knots. Tower-issued winds, by contrast, are magnetic. Knowing the reference avoids confusion when comparing reported and assigned winds.

37. A — Reaching the MDA early without the runway in sight, the pilot maintains the MDA until the missed approach point or until the runway becomes visible. Descending below MDA without visual references is prohibited. At the MAP without the runway, the pilot executes the missed approach.

38. C — The yaw damper reduces unwanted yawing motions such as Dutch roll, improving directional stability and ride comfort. It works the rudder automatically to counter yaw oscillations. It is common on swept-wing and high-altitude aircraft.

39. C — A compulsory reporting point requires a position report when operating in a non-radar environment over that point. Radar coverage relieves the routine reporting requirement. The report keeps ATC informed where radar is unavailable.

40. B — Flying beneath a thunderstorm exposes the aircraft to severe wind shear, downdrafts, and microburst activity near the surface. These can exceed climb capability at low altitude. Avoiding the area beneath the cell is essential.

41. C — OROCA provides obstruction clearance within a latitude/longitude grid block for off-route flight. It is an obstacle-clearance reference, not a guarantee of navigation signal or radar. Pilots use it for terrain awareness on direct routes.

42. D — A heading indicator that drifts about 15 degrees over time is exhibiting normal precession, requiring periodic realignment to the magnetic compass. Mechanical gyros precess gradually. Routine resetting keeps the heading accurate.

43. B — "Descend via the ARRIVAL" requires complying with the published lateral path and all altitude restrictions on the arrival. It is a clearance to fly the charted profile. The pilot meets each crossing restriction without further instruction.

44. A — Supplemental oxygen is required above 14,000 feet cabin pressure altitude because the reduced oxygen partial pressure causes hypoxic hypoxia. The thin air cannot adequately load the blood with oxygen. Oxygen restores the needed partial pressure.

45. D — A localizer is more sensitive than a VOR, with a narrower full-scale deflection tailored to the runway. The tighter course supports precise alignment on final. This greater sensitivity is why localizer tracking demands small corrections.

46. B — A turn coordinator showing a turn while the heading indicator and compass confirm a steady heading points to a failure or malfunction of the turn coordinator. The agreeing instruments are trusted over the lone disagreeing one. Cross-checking identifies the faulty instrument.

47. A — A feeder route altitude guarantees obstacle clearance along the path from the en route fix to the initial approach fix. It bridges the en route structure and the approach. Using it ensures a safe transition into the procedure.

48. A — A pilot reports "leaving" an assigned altitude when departing a previously assigned altitude in a radar environment, among other required reports. It informs ATC of the altitude change. This is one of the mandatory reports regardless of radar.

49. D — Spatial disorientation is exacerbated by fatigue, stress, or illness, which impair the pilot's perception and judgment. Physiological stressors heighten susceptibility to vestibular illusions. Being well-rested and healthy reduces the risk.

50. C — A STAR transitions arriving aircraft from the en route structure to the approach environment. It standardizes arrival routings and reduces frequency congestion. It does not replace the instrument approach itself.

51. D — The controlling figure for the lowest usable altitude on an off-airway direct route is the off-route obstruction clearance altitude for the grid block. OROCA ensures terrain and obstruction clearance off published routes. Airway MEAs apply only along those airways.

52. A — A "slam-dunk" descent makes a stabilized approach difficult because the aircraft must lose altitude and slow in a compressed distance. The high workload and energy state threaten stabilization. The pilot may need to request relief or go around.

53. A — Monitoring the localizer identification confirms the correct localizer is tuned and the signal is reliable. The Morse identifier verifies the facility and that it is in service. Failing to identify it risks tracking the wrong or an unmonitored signal.

54. B — "Maintain maximum forward speed" directs the pilot to fly as fast as is safely practical for the current configuration, without exceeding limitations. It helps ATC with spacing. The pilot stays within certificated and safe speed limits.

55. B — Carburetor icing is most likely with high humidity and temperatures roughly between 20°F and 70°F, where fuel vaporization cooling can form ice. The moisture and temperature range create the hazard even in clear air. Carb heat is the remedy.

56. D — At the clearance limit with lost communications and no further clearance, the pilot begins the approach at the EFC time, or as close as possible to the filed ETA when no EFC was issued. The lost-comm timing rules govern the descent and approach. This keeps the aircraft predictable.

57. B — Responsibility for a readback error is shared, but the pilot must fly the clearance as actually issued, not as misread. Both parties should catch errors, yet the pilot is bound by the real clearance. This is why careful readback and listening matter.

58. B — The non-holding side of a holding pattern is the area on the opposite side of the inbound course from the turns. The holding side contains the racetrack and turns. Knowing the sides is essential for correct entry and protected-airspace awareness.

59. A — Transitioning to a night visual landing over water or dark terrain heightens the risk of the black hole illusion, which tends to produce a low approach. The absence of visual cues distorts the perceived glidepath. Cross-checking instruments guards against descending too low.

60. A — Logging approaches, holding, and course tracking for currency maintains the proficiency needed for safe IFR operations. The recent experience keeps instrument skills sharp. Currency requirements exist to ensure ongoing competence, not for other certificates.