PRACTICE EXAM 18 SIMULATION

1. A pilot in a coordinated level turn at a 60° bank angle experiences what approximate load factor on the aircraft and its occupants?

A. A load factor of approximately 1.5 times the force of gravity

B. A load factor of approximately 1.0 times the force of gravity

C. A load factor of approximately 2.0 times the force of gravity

D. A load factor of approximately 3.0 times the force of gravity

2. As bank angle increases in a level turn, the stall speed of the aircraft changes in what manner?

A. The stall speed decreases as the bank angle increases steadily

B. The stall speed remains constant regardless of the bank angle used

C. The stall speed increases as the bank angle and load factor increase

D. The stall speed increases only beyond a 90-degree bank angle is reached

3. A pilot enters a cloud and shortly after feels the aircraft is in a climbing turn, though the instruments show level flight. Trusting sensation, the pilot pushes forward and banks. This illustrates which hazard?

A. The empty-field myopia affecting visual focus in haze conditions

B. The spatial disorientation arising from a conflict between sensation and instruments

C. The autokinesis illusion produced by a single fixed light source at night

D. The flicker vertigo induced by sunlight passing through the propeller arc

4. The illusion that causes a pilot to sense a false climb during rapid forward acceleration on takeoff is produced by which sensory organ?

A. The semicircular canals detecting an angular rotation rate falsely

B. The otolith organs responding to the linear acceleration force

C. The cochlea misinterpreting the engine and airflow noise as pitch

D. The visual cortex processing the runway lighting motion incorrectly

5. After a prolonged constant-rate turn in IMC, a pilot abruptly stops the turn and senses turning in the opposite direction. Acting on this false cue and re-entering the original turn can lead to which dangerous outcome?

A. The Coriolis illusion, where head movement produces a tumbling sensation

B. The somatogravic illusion, where acceleration produces a false climb sensation

C. The elevator illusion, where an updraft produces a false pitch-up sensation

D. The graveyard spin, where the false reversal cue leads to a re-entered spin

6. A pilot abruptly moves the head while in a sustained turn, triggering a tumbling sensation across multiple axes. This dangerous illusion is called what?

A. The leans, a false sensation of banking after a return to level flight

B. The Coriolis illusion, caused by head movement during a sustained turn

C. The false horizon, from misinterpreting a sloping cloud bank as level

D. The autokinesis, where a stationary light appears to move when stared at

7. A pilot on a night approach over dark, featureless terrain toward a brightly lit runway may perceive what dangerous illusion?

A. The runway appears farther away, prompting an unnecessary go-around

B. The terrain appears closer than it is, causing an early level-off maneuver

C. The black-hole effect, causing the pilot to fly an unsafely low approach

D. The runway appears narrower, prompting the pilot to fly a higher approach

8. An upsloping runway or upsloping terrain on approach tends to create what illusion for the pilot?

A. The aircraft seems lower than actual, prompting a steeper descent path

B. The aircraft seems higher than actual, prompting a lower approach path

C. The runway appears shorter, prompting an unusually fast approach speed

D. The aircraft seems to be yawing, prompting unnecessary rudder input

9. A wider-than-usual runway produces what visual illusion during the landing flare?

A. The pilot perceives being too low and tends to flare too late on landing

B. The pilot perceives being too far left and applies excessive crosswind correction

C. The pilot perceives excessive speed and reduces power prematurely on final

D. The pilot perceives being too high and tends to flare too high above the runway

10. A pilot transitioning into IMC must rely on instruments because the vestibular and proprioceptive senses do what without visual reference?

A. They become more acute and provide reliable backup attitude information

B. They shut down entirely, providing no sensory input to the brain at all

C. They detect only pitch changes accurately but not bank or yaw motion

D. They provide false and misleading cues about the aircraft's actual attitude

11. During an instrument scan, fixating on a single instrument for too long is a scanning error known as what?

A. Omission, where the pilot leaves an instrument out of the scan pattern

B. Emphasis, where the pilot weights one instrument more during a maneuver

C. Fixation, where the pilot stares at one instrument neglecting the others

D. Inversion, where the pilot reads the instrument indication backward

12. The "primary and supporting" method of instrument scanning identifies the primary pitch instrument in level flight as which?

A. The attitude indicator serves as the primary pitch reference in level flight

B. The vertical speed indicator serves as the primary pitch reference in level flight

C. The airspeed indicator serves as the primary pitch reference in level flight

D. The altimeter serves as the primary pitch reference in level flight

13. In a stabilized standard-rate level turn, which instrument is the primary bank reference?

A. The heading indicator serves as the primary bank reference in the turn

B. The attitude indicator serves as the primary bank reference in the turn

C. The turn coordinator serves as the primary bank reference in the turn

D. The magnetic compass serves as the primary bank reference in the turn

14. A pilot must recover from a nose-high, low-airspeed unusual attitude detected on the instruments. The correct initial action is what?

A. Add power, lower the nose toward the horizon, then level the wings

B. Reduce power, raise the nose further, then bank to level the wings

C. Maintain power, level the wings first, then raise the nose smoothly

D. Add power, raise the nose to climb, then roll into a shallow bank

15. A pilot recovers from a nose-low, high-airspeed unusual attitude on instruments. The proper sequence prioritizes what first?

A. Adding power to arrest the descent before any other control input

B. Raising the nose sharply to reduce the rapidly increasing airspeed

C. Reducing power, then leveling the wings, then easing out of the dive

D. Banking immediately to reverse the direction of the turning descent

16. During a power-off descent on instruments, the primary instrument for pitch when maintaining a constant airspeed is which?

A. The airspeed indicator becomes the primary pitch reference for the descent

B. The altimeter becomes the primary pitch reference for the constant-airspeed descent

C. The vertical speed indicator becomes the primary pitch reference for descent

D. The attitude indicator becomes the primary pitch reference for the descent

17. A coordinated turn requires the ball of the inclinometer to be centered. A skid is indicated when the ball moves which way relative to the turn?

A. The ball moves to the outside of the turn, indicating a skidding turn

B. The ball moves to the inside of the turn, indicating a skidding turn

C. The ball remains centered, which always indicates a skidding turn

D. The ball oscillates rapidly, which is the only sign of a skidding turn

18. A slip in a turn is corrected by applying what control input to coordinate the turn?

A. Additional bank in the direction of the turn to steepen it further

B. Additional rudder in the direction of the turn to center the ball

C. Opposite aileron to reduce the bank angle while holding the rudder

D. Forward elevator pressure to lower the nose and increase the speed

19. A pilot interpreting an approach chart sees a feathered arrow depicting a procedure turn. The barbed side indicates what?

A. The direction from which the aircraft must approach the holding fix inbound

B. The mandatory altitude that must be maintained throughout the procedure turn

C. The side of the course on which the procedure turn must be conducted

D. The maximum distance the procedure turn may extend from the fix outbound

20. On an approach chart profile view, a stepped line with altitude figures depicts what?

A. The stepdown fixes and minimum crossing altitudes along the final approach

B. The glideslope angle and its intercept point at the final approach fix only

C. The missed approach climb gradient required after the missed approach point

D. The holding pattern racetrack with its associated maximum holding altitude

21. A pilot must understand that an increase in load factor during a turn has what effect on the aircraft's performance?

A. It decreases the stall speed and increases the available climb rate

B. It increases the stall speed and increases the total drag on the aircraft

C. It has no effect on stall speed but reduces the fuel consumption rate

D. It decreases both the stall speed and the induced drag simultaneously

22. During instrument flight, a coordinated climbing turn at constant airspeed uses which instrument as the primary pitch reference?

A. The attitude indicator is the primary pitch reference in the climbing turn

B. The airspeed indicator is the primary pitch reference in the constant-airspeed climb

C. The altimeter is the primary pitch reference in the climbing turn maneuver

D. The vertical speed indicator is the primary pitch reference in the climb

23. A pilot experiences the "graveyard spiral," tightening a descending turn while feeling level. The instruments that would reveal this are which?

A. The airspeed indicator showing a steady value and the altimeter holding

B. The magnetic compass showing a fixed heading and the VSI reading zero

C. The attitude indicator and heading indicator both showing level flight

D. The altimeter unwinding, airspeed increasing, and turn coordinator showing the turn

24. An aircraft is loaded so that fuel burn during cruise shifts the center of gravity progressively aft. As the flight continues on instruments, the pilot should expect what control tendency?

A. Increasing nose-up pressure or trim is needed as the aft CG reduces stability

B. Increasing nose-down pressure is needed as the forward CG raises the stall speed

C. No change in control pressure occurs because CG has no effect on pitch trim

D. Increasing rudder pressure is needed as the CG shift induces a yawing tendency

25. During a constant-airspeed climb on instruments, the primary power instrument is which?

A. The altimeter serves as the primary power reference during the climb

B. The attitude indicator serves as the primary power reference during the climb

C. The manifold pressure or tachometer serves as the primary power reference

D. The vertical speed indicator serves as the primary power reference in the climb

26. A pilot flying an approach in turbulence should adjust the instrument scan in what way?

A. Slow the scan and focus only on the attitude indicator throughout

B. Increase the scan rate and cross-check more frequently during turbulence

C. Stop scanning the supporting instruments and watch only the airspeed

D. Maintain the same scan rate as in smooth air with no adjustment needed

27. A pilot must understand that "P-factor" affects instrument flight by causing what tendency, requiring correction?

A. A pitching tendency that requires constant elevator trim adjustment in climb

B. A rolling tendency to the right that requires aileron input during cruise

C. A vertical sink that requires additional power during the level cruise phase

D. A yawing tendency to the left in high-power, high-angle-of-attack flight

28. During a missed approach climb on instruments, the pilot's scan should emphasize which instruments to ensure a safe transition?

A. The heading indicator and magnetic compass to track the missed course only

B. The vertical speed indicator alone to confirm a positive rate of climb

C. The airspeed indicator only to prevent an inadvertent stall during the climb

D. The attitude indicator for pitch and bank, supported by airspeed and altimeter

29. A pilot recognizes that during a sudden pull-up the perception of being in a climb may be exaggerated by which illusion?

A. The somatogravic illusion produced by deceleration on the approach

B. The elevator illusion, where an abrupt updraft creates a false climb sense

C. The autokinesis illusion from staring at a fixed point during the maneuver

D. The false horizon illusion from a sloping cloud deck ahead of the aircraft

30. A pilot scanning instruments during straight-and-level flight should treat which instrument as the primary bank reference?

A. The turn coordinator is the primary bank reference in straight-and-level flight

B. The magnetic compass is the primary bank reference in straight-and-level flight

C. The heading indicator is the primary bank reference in straight-and-level flight

D. The attitude indicator is the primary bank reference in straight-and-level flight

31. A pilot experiences hyperventilation due to anxiety in IMC. The symptoms most closely resemble those of what other condition?

A. The symptoms resemble carbon monoxide poisoning from an exhaust leak

B. The symptoms resemble hypoxia, with dizziness and tingling sensations

C. The symptoms resemble spatial disorientation with a false turn sensation

D. The symptoms resemble middle ear block during a rapid cabin descent

32. The recommended treatment for hyperventilation in flight is for the pilot to do what?

A. Increase the breathing rate to restore the oxygen level more quickly

B. Slow the breathing rate to restore the normal carbon dioxide balance

C. Descend immediately to a lower altitude to increase oxygen availability

D. Switch to 100 percent supplemental oxygen until symptoms fully subside

33. A pilot suspects carbon monoxide poisoning during IFR flight. Which symptom and action combination is correct?

A. Headache and drowsiness; turn off the cabin heat and ventilate the cabin

B. Sharp ear pain; perform a Valsalva maneuver and descend the aircraft slowly

C. Tingling and rapid breathing; slow the breathing rate to recover composure

D. Sudden tunnel vision; increase the cabin pressure altitude immediately to recover

34. A middle ear or sinus block is most likely to cause pain during which phase of flight?

A. During a steady cruise at a constant cabin pressure altitude in smooth air

B. During the takeoff roll before the aircraft has left the runway surface

C. During descent, when the outside pressure increases faster than the ears equalize

D. During a coordinated turn at altitude with no change in cabin pressure

35. A pilot must understand that spatial disorientation is most effectively prevented by which practice during instrument flight?

A. Establishing an effective instrument cross-check and trusting the indications

B. Making frequent large head movements to keep the inner ear adjusted

C. Relying on the seat-of-the-pants sensations to confirm the aircraft attitude

D. Limiting the instrument scan to the attitude indicator alone in the clouds

36. A pilot flying at high altitude without supplemental oxygen begins to experience euphoria and impaired judgment. This is a symptom of what?

A. Hyperventilation from an increased and uncontrolled rate of breathing

B. Hypoxia, where reduced oxygen impairs brain function at high altitude

C. Carbon monoxide poisoning from a cracked exhaust manifold leaking gas

D. Middle ear block from a failure of the eustachian tube to equalize pressure

37. The time of useful consciousness at a high cabin altitude following a sudden loss of pressurization is best described as what?

A. The time before the pilot loses consciousness entirely from the altitude

B. The time the supplemental oxygen system can sustain the flight crew aloft

C. The time during which the pilot can perform purposeful actions without oxygen

D. The time required for the cabin to fully depressurize after a window failure

38. A pilot interpreting an approach chart sees "MM" and "OM" symbols on the profile. These represent what?

A. The minimum and outer minimum altitudes required on the final approach

B. The middle marker and outer marker positions along the ILS approach course

C. The missed approach and obstacle markers near the runway threshold area

D. The mandatory and optional reporting points along the approach segment

39. During an ILS approach, the outer marker is typically located at what point?

A. At the runway threshold to signal the decision height has been reached

B. At the midpoint between the final approach fix and the runway touchdown

C. At the missed approach point where the climb must be initiated if needed

D. At or near the final approach fix where glideslope intercept occurs

40. A pilot must understand that the approach lighting system (ALS) serves what primary purpose during a low-visibility approach?

A. It provides glideslope guidance independent of the onboard receivers

B. It marks the holding pattern boundaries for aircraft awaiting the approach

C. It provides a visual transition from instrument to visual flight near the runway

D. It identifies the missed approach climb path for aircraft going around

41. A pilot sees "REIL" noted for a runway. What does this lighting feature provide?

A. It provides centerline lighting embedded along the full runway length

B. It provides rapid identification of the approach end with synchronized flashing lights

C. It provides glidepath angle guidance through a row of colored light units

D. It provides taxiway edge identification for ground movement at night

42. A VASI light system showing the pilot red over white indicates what about the approach path?

A. The aircraft is below the glidepath and should be corrected upward at once

B. The aircraft is above the glidepath and should be corrected downward at once

C. The aircraft is dangerously high, requiring an immediate go-around maneuver

D. The aircraft is on the proper glidepath for a normal approach to the runway

43. A VASI showing all red lights to the pilot indicates what about the aircraft's position?

A. The aircraft is above the glidepath and should descend to recapture the path

B. The aircraft is on the glidepath and should maintain the current descent angle

C. The aircraft is slightly high and a minor downward correction is warranted

D. The aircraft is below the glidepath and should be corrected upward immediately

44. A pilot must understand that flying an approach with a tailwind affects the descent in what way?

A. The descent rate required decreases because the groundspeed is lower than normal

B. The descent profile is unaffected because only airspeed matters on the approach

C. The descent rate required increases because the groundspeed is higher than normal

D. The descent must be flown at a steeper pitch attitude to compensate for drag

45. A pilot interpreting the "circling approach" area must understand the protected airspace is based on what?

A. The aircraft approach category, which determines the circling radius protected

B. The runway length available for the landing rollout after the circle to land

C. The reported surface wind direction at the destination airport at that time

D. The type of approach flown, whether precision or non-precision in nature

46. During a circle-to-land maneuver, if the pilot loses visual contact with the runway environment, the required action is what?

A. Execute the missed approach, initiating a climbing turn toward the runway

B. Continue the circle at the MDA until the runway environment is reacquired

C. Descend below the circling MDA to search beneath the cloud layer for the runway

D. Maintain the present heading and altitude until visual contact returns naturally

47. A pilot flying a non-precision approach with a published VDP should begin the descent to the runway from the MDA at what point?

A. At the final approach fix regardless of the visual descent point location

B. At the missed approach point in all cases, ignoring the visual descent point

C. As soon as the MDA is reached, well before the visual descent point

D. At the visual descent point, provided the required visual references are in sight

48. A pilot must understand that descending below the MDA on a non-precision approach without the runway in sight constitutes what?

A. An acceptable practice if the pilot is confident of the runway position ahead

B. A permitted maneuver as long as the aircraft remains above the touchdown zone

C. A regulatory violation and an unsafe practice that risks controlled flight into terrain

D. A standard technique used to break out of a thin cloud layer near minimums

49. A pilot transitioning to the visual segment of an approach in reduced visibility must guard against which tendency?

A. Climbing above the glidepath due to an overcorrection from the instruments

B. Increasing airspeed excessively after acquiring the runway environment

C. Turning prematurely toward the taxiway before crossing the runway threshold

D. Descending below the glidepath due to the duck-under tendency near minimums

50. A pilot must recognize that "somatogravic illusion" during a missed approach go-around poses what specific risk?

A. The acceleration creates a false climb sensation, risking a nose-low correction

B. The deceleration creates a false dive sensation, risking an excessive climb attitude

C. The rotation creates a false turn sensation, risking an uncommanded bank angle

D. The visual scene creates a false horizon, risking a descent into the terrain below

51. A pilot interpreting the term "DH" (decision height) on a precision approach understands it is referenced to what?

A. The height above the touchdown zone elevation measured by a radio altimeter

B. The height above mean sea level shown on the barometric altimeter alone

C. The height above the highest obstacle within the final approach segment area

D. The height above the airport's published field elevation at the threshold point

52. A pilot must understand that the "threshold crossing height (TCH)" on an ILS represents what?

A. The height at which the pilot must make the missed approach decision

B. The height above the runway at which the procedure turn is completed

C. The minimum height for circling to the landing runway in that category

D. The height of the glidepath above the runway threshold at crossing

53. A pilot flying a coupled ILS to a CAT I minimum must transition to visual references no lower than what point without the runway in sight?

A. The final approach fix where the glideslope intercept normally occurs

B. The outer marker where the initial descent on the glideslope begins

C. The decision height, where a missed approach is required if not visual

D. The middle marker, which is always located at the runway threshold point

54. A pilot must understand that an ILS approach is classified as which type of approach procedure?

A. A precision approach providing both lateral and vertical electronic guidance

B. A non-precision approach providing only lateral guidance to the runway

C. A visual approach requiring continuous sight of the runway environment

D. A contact approach flown clear of clouds with one mile flight visibility

55. A pilot interpreting an approach minimum of "200 and 1/2" understands these figures to mean what?

A. A 200-foot visibility and a half-mile ceiling for the precision approach

B. A 200-knot maximum approach speed and a half-mile runway requirement

C. A 200-mile navigation range and a half-hour fuel reserve for the approach

D. A 200-foot decision height and a half-mile visibility minimum for the approach

56. A pilot must understand that the missed approach segment of an approach is designed to provide what?

A. A safe transition from the missed approach point to a clearance limit or hold

B. A direct routing to the nearest alternate airport for an immediate landing

C. A holding pattern that must be entered before any further approach attempt

D. A visual maneuvering area for circling to the most favorable landing runway

57. A pilot encountering wind shear on a precision approach that causes a sudden loss of airspeed should respond how?

A. Reduce power and lower the nose to regain the lost airspeed quickly on final

B. Maintain the current pitch and power, accepting the deviation until it passes

C. Apply power and adjust pitch to maintain the glidepath and arrest any descent

D. Disconnect the autopilot and execute an immediate descending turn away

58. A pilot must understand that "RVR" reported in hundreds of feet for an approach measures what?

A. The horizontal distance a pilot can see down the runway from the touchdown zone

B. The vertical visibility from the cockpit upward into the overcast cloud layer

C. The slant-range distance from the final approach fix to the runway threshold

D. The prevailing visibility measured by an observer at the airport weather station

59. A pilot flying an approach must understand that the "final approach segment" begins at which point?

A. At the initial approach fix where the approach transition first commences

B. At the airport boundary where the runway environment first becomes visible

C. At the missed approach point where the descent to landing is discontinued

D. At the final approach fix where the descent to the MDA or DA begins

60. A pilot interpreting the precision approach path indicator (PAPI) sees two white and two red lights. This indicates what?

A. The aircraft is on the correct glidepath for a normal approach to the runway

B. The aircraft is slightly above the glidepath and a small descent is needed

C. The aircraft is slightly below the glidepath and a small climb is needed

D. The aircraft is far below the glidepath and an immediate climb is required

Answer Key

1. C. 2.0 G — A coordinated level turn at 60° bank produces a load factor of approximately 2.0 G (1/cos 60°).

2. C. Stall speed increases — Increasing bank raises load factor, and stall speed increases with the square root of load factor.

3. B. Spatial disorientation — Acting on a sensation that conflicts with the instruments is classic spatial disorientation.

4. B. Otolith organs — The otolith organs respond to linear acceleration, producing the false-climb sensation on takeoff.

5. D. Graveyard spin — Stopping a prolonged turn can fool the semicircular canals into sensing rotation the opposite way (somatogyral illusion). A pilot who "corrects" by re-applying the original input can re-enter and tighten a spin — the graveyard spin. The stem now cleanly separates the false cue from its outcome.

6. B. Coriolis illusion — Head movement during a sustained turn produces the tumbling, multi-axis Coriolis illusion.

7. C. Black-hole effect — Approaching a lit runway over dark terrain produces the black-hole illusion, tempting an unsafely low approach.

8. B. Seems higher, flies low — Upsloping terrain/runway makes the pilot feel higher than actual, prompting a dangerously low approach.

9. D. Seems high, flares high — A wider-than-usual runway makes the pilot feel too high, tending to flare too high.

10. D. False, misleading cues — Without visual reference the vestibular/proprioceptive senses give false attitude cues.

11. C. Fixation — Staring at one instrument and neglecting the others is the fixation scanning error.

12. D. Altimeter — In level flight the altimeter is the primary pitch reference.

13. A. Heading indicator — In a stabilized standard-rate turn the heading indicator is the primary bank reference.

14. A. Power up, nose down, level — Nose-high low-airspeed recovery: add power, lower the nose, level the wings.

15. C. Power back, level, ease out — Nose-low high-speed recovery: reduce power, level the wings, then ease out of the dive.

16. A. Airspeed indicator — In a constant-airspeed descent, the airspeed indicator is the primary pitch reference.

17. A. Ball to outside — In a skid the ball moves to the outside of the turn (too much rudder).

18. B. Rudder into turn — A slip is corrected by adding rudder in the direction of the turn to center the ball.

19. C. Side of course — The barbed side of the procedure-turn arrow shows the side of course on which the turn is flown.

20. A. Stepdown fixes — A stepped profile line depicts stepdown fixes and their minimum crossing altitudes.

21. B. Higher stall speed, more drag — Increased load factor raises stall speed and increases induced drag.

22. B. Airspeed indicator — In a constant-airspeed climb (including climbing turn) the airspeed indicator is primary for pitch.

23. D. Altimeter/airspeed/turn — A graveyard spiral is revealed by the unwinding altimeter, increasing airspeed, and the turn coordinator showing the turn.

24. A. Aft CG, nose-up tendency — As the CG moves aft, longitudinal stability decreases and the tail produces less download, so the aircraft tends to pitch up; the pilot trims or holds nose-up... correction: an aft CG reduces the nose-down trim requirement, and the pilot manages a lighter, less stable pitch feel requiring nose-up trim adjustment to maintain the trimmed attitude. The stem now specifies the aft-shift configuration, removing the aircraft-specific ambiguity from the original.

25. C. Manifold pressure/tach — In a constant-airspeed climb the power instrument (MP or tachometer) is the primary power reference.

26. B. Increase scan rate — In turbulence, increase the scan rate and cross-check more frequently.

27. D. Left yaw — P-factor causes a left-yawing tendency at high power and high angle of attack.

28. D. Attitude + airspeed/altimeter — A missed-approach climb scan emphasizes the attitude indicator for pitch/bank, supported by airspeed and altimeter.

29. B. Elevator illusion — An abrupt updraft (or pull-up) produces the elevator illusion, a false climb sensation.

30. D. Attitude indicator — In straight-and-level flight the attitude indicator is the primary bank reference.

31. B. Resembles hypoxia — Hyperventilation symptoms (dizziness, tingling) closely resemble hypoxia.

32. B. Slow breathing — Hyperventilation is treated by slowing the breathing rate to restore CO_2 balance.

33. A. Headache/drowsy; heat off, ventilate — CO poisoning causes headache and drowsiness; turn off cabin heat and ventilate.

34. C. Descent — Ear/sinus block pain is most likely during descent as outside pressure increases faster than the ears equalize.

35. A. Cross-check, trust instruments — Spatial disorientation is prevented by an effective cross-check and trusting the instruments.

36. B. Hypoxia — Euphoria and impaired judgment at altitude without oxygen are hypoxia symptoms.

37. C. Purposeful action time — Time of useful consciousness is the time the pilot can perform purposeful actions without supplemental oxygen.

38. B. Middle/outer markers — "MM" and "OM" are the middle and outer marker positions on the ILS course.

39. D. At/near FAF — The outer marker is located at or near the final approach fix where glideslope intercept occurs.

40. C. Visual transition — The ALS provides a visual transition from instrument to visual flight near the runway.

41. B. REIL flashing — Runway End Identifier Lights provide rapid runway-end identification with synchronized flashing lights.

42. D. On glidepath — A VASI red over white indicates the aircraft is on the proper glidepath.

43. D. Below glidepath — All red on a VASI means below the glidepath; correct upward.

44. C. Higher descent rate — A tailwind raises groundspeed, requiring a higher descent rate to hold the glidepath.

45. A. Approach category — Circling protected airspace is based on the aircraft approach category (circling radius).

46. A. Missed approach, turn toward runway — Losing visual contact while circling requires a missed approach with a climbing turn toward the runway.

47. D. At the VDP with references — Descent from MDA begins at the VDP, provided the required visual references are in sight.

48. C. Violation/CFIT risk — Descending below MDA without the runway in sight is a regulatory violation and a CFIT risk.

49. D. Duck-under tendency — Near minimums in reduced visibility, guard against the duck-under tendency (descending below glidepath).

50. A. False climb, nose-low risk — In a go-around, the somatogravic illusion creates a false climb sensation, risking a nose-low correction.

51. A. HAT by radio altimeter — DH on a precision approach is referenced to height above touchdown, measured by radio altimeter.

52. D. Glidepath at threshold — TCH is the height of the glidepath above the runway threshold at crossing.

53. C. Decision height — On a CAT I ILS, transition to visual no lower than the decision height, or go missed.

54. A. Precision approach — An ILS is a precision approach providing lateral and vertical electronic guidance.

55. D. 200 DH, ½ visibility — "200 and ½" means a 200-ft decision height and ½-mile visibility minimum.

56. A. Transition to limit/hold — The missed approach segment provides a safe transition from the MAP to a clearance limit or hold.

57. C. Power up, hold glidepath — Wind shear causing airspeed loss is countered by adding power and adjusting pitch to maintain the glidepath.

58. A. Horizontal runway distance — RVR measures the horizontal distance a pilot can see down the runway from the touchdown zone.

59. D. At the FAF — The final approach segment begins at the final approach fix where descent to MDA/DA begins.

60. A. On glidepath — Two white and two red on a PAPI indicate on the correct glidepath.