PRACTICE EXAM 8: INTEGRATED KNOWLEDGE SIMULATION — 105 QUESTIONS

1. A commercial pilot without an instrument rating plans a 90-NM night flight carrying a paying passenger, and the destination reports a temperature/dewpoint spread of 1°C. Which factor alone makes the flight impermissible?

A. The narrow temperature/dewpoint spread

B. The 90-NM distance during the day

C. The certificate limitation prohibiting passenger-for-hire at night

2. An aircraft used for flight instruction for hire is at 98 hours since its last 100-hour inspection and the alternator has just failed in flight. What governs the immediate decision and the maintenance status?

A. The flight may continue indefinitely since the engine runs on magnetos

B. Shed loads and land, and the 100-hour inspection is due within the next 2 hours of service

C. The 100-hour interval may be ignored because the engine is unaffected

3. A pilot computes a density altitude far above field elevation on a hot day at a high-elevation airport with a 90-NM passenger-for-hire leg planned. Which combined consideration is most important before departure?

A. Performance margins from density altitude and the certificate's distance limitation

B. The transponder inspection interval

C. The color of the airport beacon

4. During a constant-speed-propeller takeoff at high density altitude, a pilot must clear obstacles off the departure end. Which combination is correct?

A. Set high RPM/low blade angle and climb at VX to clear the obstacle

B. Set low RPM/high blade angle and climb at VY

C. Reduce manifold pressure and climb at maneuvering speed

5. A METAR shows "BKN008 OVC015 3SM BR" at the destination, and the pilot's personal minimums require a 1,000-foot ceiling. What is the ceiling, and what is the decision?

A. 1,500 feet; continue the approach

B. No ceiling; continue freely

C. 800 feet, below personal minimums; divert to the alternate

6. A pilot in a 60° bank level turn at low altitude in the pattern notices the airspeed near stall. What two related factors explain the increased stall speed?

A. Reduced weight and a forward CG

B. A 2 G load factor raising stall speed by about 41%

C. Ground effect and wake turbulence

7. A pilot loses electrical power in IMC and notices the vacuum-driven attitude indicator still functions but the radios are dead. What two systems explain this outcome?

A. The magnetos failed but the battery powers the gyros

B. The pitot-static system failed, disabling the radios

C. The magnetos and vacuum system are independent of the electrical system

8. A pilot must report an in-flight fire that occurred during a commercial photography flight under Part 91. Which agency and timeline apply for the immediate action?

A. Immediate notification to the NTSB

B. A written report to the FAA within 30 days only

C. No report, since the flight was under Part 91

9. A pilot encounters carburetor icing on a humid 70°F day while descending toward an airport reporting a narrowing temperature/dewpoint spread. What two actions address the immediate hazards?

A. Apply carburetor heat and prepare for possible fog at the destination

B. Lean the mixture and expect clearing skies

C. Reduce RPM and climb above the haze

10. A pilot plans a flight that will cross an active restricted area and operate above 14,000 feet cabin altitude. Which two requirements must be satisfied?

A. A Mode C transponder only and no oxygen

B. Permission from the controlling agency and continuous crew oxygen above 14,000 feet

C. An IFR clearance and oxygen only above 15,000 feet

11. A 100 NM leg is flown at a groundspeed of 200 knots into a destination with an active TFR. What is the leg time, and what must the pilot do about the TFR?

A. 45 minutes; ignore the TFR

B. 30 minutes; request a clearance to enter the TFR

C. 30 minutes; reroute to avoid the TFR entirely

12. A pilot recognizes the macho attitude while deciding whether to fly an overweight airplane on a short, high-density-altitude runway. What is the correct combined response?

A. Apply the antidote and depart since the CG is in limits

B. Apply "Taking chances is foolish" and reduce the load to within gross weight

C. Add power to compensate for the weight and density altitude

13. A pilot must determine whether a flight constitutes common carriage when asked to fly the public point-to-point for a fee at night without an instrument rating. What two reasons make it impermissible?

A. It is illegal common carriage, and the night passenger-for-hire limitation also applies

B. Only the night limitation applies; the carriage itself is legal

C. Neither factor applies if the flight is under 50 NM

14. A pilot flying VFR notices the ammeter discharging and the destination ceiling lowering toward minimums. What two-part action is most prudent?

A. Continue and monitor both, since the engine still runs

B. Shed electrical loads and divert before the ceiling drops further

C. Increase RPM to restore the alternator and press on

15. A pilot computes pressure altitude with the altimeter set below 29.92 and then must determine oxygen requirements at the resulting high cabin altitude. Which is correct?

A. Pressure altitude is lower than field elevation, and no oxygen is needed

B. Pressure altitude equals field elevation, and oxygen is optional

C. Pressure altitude is higher than field elevation, and crew oxygen rules apply above 12,500 feet beyond 30 minutes

16. A pilot must cross a mountain ridge in a constant-speed-propeller airplane with strong winds aloft and a high density altitude. What combined technique is best?

A. Cross perpendicular at minimum altitude with low RPM

B. Approach at 45° with generous altitude, set high RPM, and expect lee-side downdrafts

C. Cross downwind at maneuvering speed with reduced power

17. A pilot loses the static source in IMC and must use the alternate static source while flying an approach. What two instrument effects result?

A. The altimeter reads slightly high and the airspeed slightly fast using cabin pressure

B. The attitude indicator tumbles and the compass freezes

C. The vacuum instruments fail and the radios go dead

18. A pilot recognizes a stall-spin risk while making a skidding base-to-final turn at low altitude near a thunderstorm. What two-part response is correct?

A. Tighten the turn with rudder and continue toward the storm

B. Keep the turn coordinated, respect the angle of attack, and avoid the storm by 20 NM

C. Increase bank and add aft elevator to expedite the turn

19. A pilot must determine the right of way when converging head-on with another airplane while both are near an active MOA. What is correct?

A. The aircraft on the left has the right of way, and the MOA bars entry

B. Maintain heading and expect the other to move

C. Both alter course to the right, and the VFR pilot may transit the MOA with caution

20. A pilot computes weight and balance and finds the airplane within CG but overweight, with a high-density-altitude takeoff planned. What is the correct conclusion?

A. The loading is acceptable since the CG is in limits

B. Only the night reserve must be reduced

C. The airplane is overweight and unsafe, especially at high density altitude; reduce the load

21. A pilot on a cross-country detects carbon monoxide symptoms with the cabin heat on while approaching deteriorating weather. What two-part action is correct?

A. Shut off the cabin heat, ventilate, and divert before the weather worsens

B. Increase the cabin heat and continue to the destination

C. Ignore the symptoms and monitor the weather only

22. A pilot must determine the fuel for a 2-hour flight at 11 gallons per hour plus the night VFR reserve. What is the cruise fuel, and which reserve applies?

A. 22 gallons cruise, with a 45-minute night reserve added

B. 22 gallons cruise, with a 30-minute day reserve added

C. 18 gallons cruise, with no reserve required

23. A pilot recognizes that an aft CG beyond the limit is dangerous and notices a stall-spin scenario developing. Why is this combination especially hazardous?

A. The forward CG raises stall speed and improves recovery

B. The aft CG lowers stall speed and aids recovery

C. The aft CG degrades stall and spin recovery, the most dangerous time to be out of limits

24. A pilot must decide whether to fly into an area with an active SIGMET for severe icing in an airplane without anti-ice, while the temperature is at 0°C in visible moisture. What two factors confirm the hazard?

A. The airplane is equipped for icing, so no hazard exists

B. The SIGMET warns all aircraft, and structural icing conditions (visible moisture at 0°C) are present

C. Only the SIGMET matters; the temperature is irrelevant

25. A pilot computes that a 60° bank produces a 2 G load factor and recognizes the structural implication near maneuvering speed. What is the combined point?

A. Load factor decreases with bank, so VA is irrelevant

B. The 2 G load raises stall speed about 41%, and exceeding VA risks overstress

C. Bank angle does not affect load factor or VA

26. A pilot must determine the ceiling from "FEW040 SCT080" and decide on a VFR departure in Class D airspace. What is correct?

A. The ceiling is 4,000 feet, below VFR minimums

B. The ceiling is 8,000 feet, requiring an IFR clearance

C. There is no ceiling, and VFR requires 3 SM visibility with the standard cloud clearance

27. A pilot recognizes the engine magneto check shows no RPM drop on one magneto before a flight with a paying passenger. What two-part conclusion applies?

A. A grounding problem exists; resolve it before the for-hire flight

B. The magneto is healthy; depart with the passenger

C. The governor failed; reduce RPM and depart

28. A pilot must operate above 14,000 feet cabin altitude in a constant-speed-propeller airplane and recognizes both an oxygen and a performance consideration. Which is correct?

A. No oxygen is needed, and true airspeed equals indicated airspeed

B. Oxygen is needed only above 15,000 feet, and indicated airspeed exceeds true

C. The crew must use oxygen the entire time, and true airspeed exceeds indicated at altitude

29. A pilot must determine the right of way between an airplane and a glider while both approach an airport reporting a narrowing temperature/dewpoint spread. What is correct?

A. The airplane has priority, and clear skies are expected

B. The glider has the right of way, and fog may form

C. They share priority, and visibility will improve

30. A pilot flying at night must maintain position lights and recognizes a vacuum failure developing. Which two-part understanding is correct?

A. Position lights are optional at night, and the vacuum failure stops the engine

B. Position lights (red left, green right, white tail) are required, and the vacuum failure makes the attitude indicator unreliable

C. Position lights are required only in clouds, and the vacuum system powers the radios

31. A pilot must report a change of permanent address and also confirm the flight review is current before a commercial flight. Which two deadlines apply?

A. Report the address within 30 days, and the flight review is valid for 24 calendar months

B. Report the address within 7 days, and the flight review is valid for 12 months

C. No address report is needed, and the flight review is valid for 36 months

32. A pilot encounters wind shear on final near a microburst while flying a constant-speed-propeller airplane. What two-part action is correct?

A. Reduce power and continue the approach

B. Add aft elevator and hold the glidepath

C. Add power (advancing prop then throttle as needed) and go around to avoid the microburst

33. A pilot must determine VFR cloud clearance in Class C airspace while planning a flight that also crosses Class B. Which is correct?

A. Class C requires 500 below, 1,000 above, 2,000 horizontal; Class B requires clear of clouds

B. Both require clear of clouds only

C. Both require 1,000 below, 1,000 above, 1 SM horizontal

34. A pilot computes the standard temperature at 3,000 feet and then the density altitude on a 30°C day. What are the values?

A. Standard 9°C; the 21°C deviation adds about 2,520 feet to density altitude

B. Standard 15°C; no density-altitude change

C. Standard 5°C; density altitude equals pressure altitude

35. A pilot must decide whether to accept a banner-towing job at low altitude near a congested area without a waiver. What two reasons make this impermissible?

A. The pilot has a commercial certificate, so it is permitted

B. Banner towing requires a waiver, and §91.119 minimum altitudes apply over congested areas

C. Only the altitude rule matters; no waiver is needed

36. A pilot loses radio communication near a towered airport at night while the position lights are on. What two-part procedure applies?

A. Squawk 1200 and land without signals

B. Squawk 7700 and land on any runway immediately

C. Squawk 7600 and watch for light gun signals while maintaining position lights

37. A pilot must determine the effect of a forward CG on a landing and connect it to the flare difficulty observed. What is the combined explanation?

A. A forward CG lowers stall speed and eases the flare

B. An aft CG raises stall speed and makes the flare hard

C. A forward CG raises stall speed and reduces elevator authority in the flare

38. A pilot plans a flight through an AIRMET Zulu area in an airplane without anti-ice while the freezing level is at the cruising altitude. What two factors confirm the icing risk?

A. AIRMET Zulu covers icing and freezing levels, and visible moisture at or below 0°C produces structural ice

B. AIRMET Tango covers icing, and the temperature is irrelevant

C. AIRMET Sierra covers icing, and only IFR matters

39. A pilot recognizes get-there-itis while low on fuel near a destination reporting a microburst. What two-part decision is correct?

A. Continue and land quickly before the fuel runs out

B. Acknowledge the bias, divert to refuel, and avoid the microburst

C. Increase power to arrive before the storm intensifies

40. A pilot must determine the privileges available with a second-class medical and recognize the night passenger-for-hire limitation without an instrument rating. Which is correct?

A. A second-class medical removes the night limitation

B. The second-class medical supports commercial privileges, but the instrument-rating limitation still bars night passenger-for-hire

C. A third-class medical is sufficient for commercial night flights

41. A pilot computes a CG within limits but must also confirm the total weight is acceptable at a high-density-altitude airport. What is the correct combined conclusion?

A. The CG being in limits is sufficient regardless of weight

B. Only the weight matters; CG is irrelevant at altitude

C. Both weight and CG must be within limits, and high density altitude further degrades performance

42. A pilot encounters a thunderstorm in its mature stage 15 NM from the route while flying VFR. What two-part action is correct?

A. Widen the route to at least 20 NM, since the mature stage is the most hazardous

B. Continue, since 15 NM is sufficient and the storm is weakening

C. Fly beneath the storm to stay below the turbulence

43. A pilot must determine the documents required aboard and recognize which must be displayed for a for-hire flight. Which is correct?

A. The ARROW documents are required, and the airworthiness certificate must be displayed

B. Only the registration must be aboard, displayed to passengers

C. The pilot's logbook must be aboard and displayed

44. A pilot recognizes spatial disorientation in clouds while the vacuum-driven attitude indicator is failing. What two-part response is correct?

A. Trust the failing attitude indicator and bodily sensations

B. Close the eyes until the sensation passes

C. Cross-check the remaining instruments using partial-panel technique and trust them

45. A pilot must determine the fuel reserve for an IFR flight to a destination requiring an alternate. Which is correct?

A. 30 minutes beyond the destination only

B. Enough to reach the destination, then the alternate, plus 45 minutes

C. 45 minutes beyond the destination with no alternate fuel

46. A pilot flying a retractable-gear airplane hears the gear warning horn on approach while distracted by a passenger. What two-part action is correct?

A. Silence the horn and continue, since the flaps are set

B. Ignore the horn and brief the passenger

C. Verify the gear is down and locked (three green) and complete the GUMPS check

47. A pilot must determine the airspace entry requirement for a busy airport surrounded by a solid blue boundary while also needing a Mode C transponder. Which is correct?

A. Class B requires an explicit ATC clearance and Mode C within the 30-NM veil

B. Class C requires only established communication and no transponder

C. Class D requires an IFR clearance

48. A pilot encounters detonation while operating oversquare at high power on a hot climb. What two-part understanding addresses the cause?

A. Detonation is normal combustion, so no action is needed

B. Preignition and detonation are identical and harmless

C. Detonation is abnormal explosive combustion aggravated by high power/temperature; reduce power and enrich the mixture

49. A pilot must determine the right of way when overtaking a slower aircraft near an airport reporting deteriorating visibility. What two-part understanding is correct?

A. The overtaking aircraft has the right of way and passes left

B. The overtaken aircraft has the right of way; pass to the right and watch the lowering visibility

C. The faster aircraft always has priority regardless of position

50. A pilot computes that leaning the mixture is needed at altitude while also recognizing the engine runs rough full-rich. What is the combined explanation?

A. The mixture is too lean; enrich it

B. The thinner air makes the mixture too rich; lean it to restore the proper ratio

C. The magnetos have failed; land immediately

51. A pilot must decide whether to fly with an inoperative required instrument while a paying passenger waits. What governs the decision?

A. Resolve the discrepancy before flight, since a required instrument cannot simply be placarded and flown

B. Placard it and depart with the passenger

C. Depart and fix it at the destination

52. A pilot recognizes the antidote "It could happen to me" while deciding whether to penetrate a line of thunderstorms. Which hazardous attitude and action are correct?

A. Macho; fly between the cells quickly

B. Invulnerability; avoid the storms and reroute

C. Resignation; continue since nothing can be done

53. A pilot must determine the standard traffic pattern altitude and direction while entering an unfamiliar non-towered airport at dusk. Which is correct?

A. Right turns at 500 feet AGL, announced on center frequency

B. Straight-in only, with no announcements

C. Left turns (unless indicated) at 1,000 feet AGL, announced on the CTAF

54. A pilot encounters a temperature inversion with smooth air near the surface and warmer air aloft while planning a departure into reduced visibility. What two-part hazard applies?

A. Severe icing in the inversion and clear skies above

B. Engine power loss at the boundary and improving visibility

C. Wind shear at the top of the inversion and reduced visibility trapped below

55. A pilot computes the VFR day fuel reserve and recognizes it must be met at normal cruise consumption. Which is correct?

A. Enough to reach the destination plus 30 minutes at normal cruise

B. Enough to reach the destination plus 45 minutes at maximum power

C. Enough to reach the destination with no reserve required

56. A pilot must determine the effect of a tailwind on both takeoff and landing while operating at a high-density-altitude airport. What is the combined effect?

A. The tailwind decreases both distances, offsetting density altitude

B. The tailwind increases both distances, compounding the density-altitude penalty

C. The tailwind has no effect at high density altitude

57. A pilot recognizes the gear must be verified before landing and connects the warning horn to the throttle position. What is the combined understanding?

A. The horn sounds when the throttle is retarded with the gear not down and locked; verify three green

B. The horn indicates the flaps are extended; retract them

C. The horn indicates a lean mixture; enrich it

58. A pilot must decide whether to continue VFR into lowering ceilings while the temperature/dewpoint spread narrows toward fog. What two-part decision is correct?

A. Divert or land before the ceiling drops and fog forms

B. Continue at low altitude beneath the clouds

C. Climb into the clouds to get on top

59. A pilot must determine the oxygen requirement between 12,500 and 14,000 feet cabin altitude for a 45-minute exposure. Which is correct?

A. No oxygen is required at any point

B. The crew must use oxygen for the time exceeding 30 minutes

C. All occupants must use oxygen the entire time

60. A pilot recognizes that the first action after an engine failure is to fly the airplane and establish best glide, then connects it to L/Dmax. What is the combined understanding?

A. Best glide is the never-exceed speed for maximum distance

B. Best glide is maneuvering speed for structural protection

C. Best glide, near L/Dmax, gives the maximum gliding distance to reach a landing site

61. A pilot must determine the right action for an active restricted area while also confirming the VOR is current for IFR. Which two requirements apply?

A. Enter the restricted area freely, and the VOR check is every 90 days

B. Avoid the restricted area, and the VOR check is every 12 months

C. Obtain permission for the restricted area, and the VOR check is required within 30 days

62. A pilot encounters reverse sensing on the VOR while diverting under time pressure. What two-part action is correct?

A. Replace the receiver and continue

B. Set the OBS to match the direction of flight, then proceed with the diversion

C. Ignore the CDI and navigate by the compass alone

63. A pilot must determine the privileges limitation that restricts a non-instrument-rated commercial pilot and connect it to a 60-NM daytime passenger-for-hire flight. Which is correct?

A. The flight is prohibited, since it exceeds the 50-NM limit for passenger-for-hire

B. The flight is permitted, since the limitation applies only at night

C. The flight is permitted regardless of distance with a second-class medical

64. A pilot recognizes the mature thunderstorm stage and the microburst hazard while on approach. What two-part understanding is correct?

A. The mature stage has updrafts and downdrafts, and a microburst causes severe low-level wind shear

B. The cumulus stage is most dangerous, and microbursts are harmless

C. The dissipating stage produces microbursts only

65. A pilot must determine the ceiling from "SCT020 BKN035 OVC060" and decide on a VFR approach. What is the ceiling?

A. 2,000 feet AGL

B. 6,000 feet AGL

C. 3,500 feet AGL

66. A pilot recognizes that exceeding the critical angle of attack stalls the wing at any airspeed and connects it to a steep turn in the pattern. What is the combined understanding?

A. The wing cannot stall above the published stall speed

B. The wing can stall in a steep turn above the published stall speed if the critical angle is exceeded

C. Stall speed never changes with bank angle

67. A pilot must determine the documents required for a domestic for-hire flight and exclude one not needed domestically. Which is excluded?

A. The airworthiness certificate

B. The operating limitations

C. The radio station license

68. A pilot recognizes carbon monoxide risk from a cracked exhaust feeding the cabin heater and connects it to hypemic hypoxia. What is the combined understanding?

A. CO from the heater causes hypemic hypoxia by impairing the blood's oxygen-carrying ability

B. CO causes hypoxic hypoxia only at high altitude

C. CO has no effect at low altitude

69. A pilot must determine the maximum time the 100-hour inspection may be exceeded to reach a maintenance facility and how the excess is treated. Which is correct?

A. Up to 25 hours, and the excess is forgiven

B. Up to 10 hours, and the interval restarts at zero

C. Up to 10 hours, and the excess is included in the next interval

70. A pilot recognizes the antidote "Follow the rules; they are usually right" while tempted to bust an active TFR. Which hazardous attitude and action are correct?

A. Impulsivity; act quickly to transit

B. Anti-authority; comply with the TFR and reroute

C. Macho; penetrate the TFR to save time

71. A pilot must determine the VFR weather minimums in Class E airspace at 11,000 feet MSL while planning a high-altitude cruise. Which is correct?

A. 3 SM visibility with 500/1,000/2,000 cloud clearance

B. 5 SM visibility with 1,000/1,000/1-SM cloud clearance

C. Clear of clouds with 1 SM visibility

72. A pilot recognizes that a constant-speed propeller requires increasing RPM before manifold pressure during a power increase, while configuring for a high-density-altitude takeoff. What is the combined understanding?

A. Increase RPM (prop) first, then manifold pressure (throttle), and expect reduced performance at altitude

B. Increase manifold pressure first, then RPM, and expect better performance at altitude

C. Change only the mixture during the power increase

73. A pilot must determine the right action for a flight that would hold out to the public for hire and connect it to the certificate required. Which is correct?

A. A commercial certificate authorizes the flight

B. The flight is common carriage requiring an air carrier certificate under Part 119

C. The flight is permitted if under 50 NM

74. A pilot recognizes that a 45-minute reserve applies to both night VFR and IFR while planning a night IFR flight to a destination requiring an alternate. Which is correct?

A. 30 minutes for both, with no alternate fuel

B. 45 minutes for night VFR only, none for IFR

C. 45 minutes for IFR plus fuel to the alternate, and 45 minutes for night VFR

75. A pilot must determine the effect of high humidity on density altitude while planning a takeoff on a hot, humid day. What is the combined effect?

A. Humid air is denser, improving performance

B. Humid air is less dense, raising density altitude and degrading performance

C. Humidity has no effect on density altitude

76. A pilot recognizes the engine continues to run after the master switch is off and connects it to magneto independence before a night flight. What is the combined understanding?

A. The magnetos are independent of the electrical system, so the engine runs even with the master off

B. The battery powers the spark plugs directly

C. The alternator continues to supply spark

77. A pilot must determine the right of way for an aircraft in distress while also avoiding a nearby thunderstorm. Which is correct?

A. The aircraft in distress has priority over all, and the storm must be avoided by 20 NM

B. The aircraft in distress yields to all others

C. Distress aircraft share priority with gliders

78. A pilot recognizes that VLO and VLE govern different gear operations while flying a retractable-gear airplane at high speed. What is the combined understanding?

A. VLO and VLE are identical

B. VLE governs operating the gear; VLO governs flying with it extended

C. VLO governs operating the gear; VLE governs flying with it extended

79. A pilot must determine the standard atmospheric pressure and temperature while computing pressure altitude. Which is correct?

A. 29.92 in. Hg and 15°C at sea level

B. 30.00 in. Hg and 20°C

C. 28.92 in. Hg and 0°C

80. A pilot recognizes that a forward CG increases stability but raises stall speed while loading a flight near the forward limit. What is the combined understanding?

A. A forward CG decreases stability and lowers stall speed

B. A forward CG increases stability and raises stall speed, and may make the flare harder

C. A forward CG has no effect on handling

81. A pilot must determine the right action when the static port blocks in IMC and connect it to the alternate static source. Which is correct?

A. Use the alternate static source, expecting the altimeter to read slightly high

B. Switch magnetos to clear the blockage

C. Increase RPM to restore static pressure

82. A pilot recognizes the AIRMET types and must match Tango to its hazard while planning a flight with strong surface winds. Which is correct?

A. AIRMET Sierra covers turbulence and wind

B. AIRMET Zulu covers turbulence and wind

C. AIRMET Tango covers moderate turbulence, strong surface winds, and low-level wind shear

83. A pilot must determine the squawk code for an emergency while also recognizing the lost-comm code. Which pairing is correct?

A. 7700 for lost comms, 7600 for emergency

B. 1200 for emergency, 7700 for VFR

C. 7700 for emergency, 7600 for lost communications

84. A pilot recognizes that wingtip vortices are strongest behind a heavy, clean, slow aircraft and connects it to a landing behind a large jet. What two-part action is correct?

A. Land before the jet's touchdown point and stay below its path

B. Stay at or above the jet's flight path and land beyond its touchdown point

C. Match the jet's exact glidepath and touchdown point

85. A pilot must determine the oxygen requirement above 15,000 feet cabin altitude for passengers. Which is correct?

A. No oxygen is required for passengers

B. Supplemental oxygen must be provided to each occupant

C. Only the pilot needs oxygen

86. A pilot recognizes that a spin requires a stalled wing and yaw while recovering from an uncoordinated stall. What is the combined understanding?

A. A spin requires both a stall and yaw; recover with the PARE procedure

B. A spin requires only high airspeed

C. A spin cannot occur without an aft CG

87. A pilot must determine the correct climb speed to clear an obstacle while also setting the constant-speed propeller for takeoff. Which is correct?

A. Climb at VY with low RPM

B. Climb at maneuvering speed with high manifold pressure

C. Climb at VX with high RPM/low blade angle to clear the obstacle

88. A pilot recognizes that a special flight permit is needed to fly an unairworthy-but-safe airplane to maintenance while also confirming the pilot's privileges. Which is correct?

A. A special flight permit (ferry permit) is required for the repositioning flight

B. A second-class medical alone authorizes the flight

C. A flight review authorizes the unairworthy flight

89. A pilot must determine the cloud clearance for Class B while planning a flight that also crosses Class E below 10,000 feet. Which is correct?

A. Both require clear of clouds

B. Class B requires clear of clouds; Class E below 10,000 requires 500/1,000/2,000

C. Both require 1,000/1,000/1 SM

90. A pilot recognizes that the heading indicator drifts and must be reset to the compass while navigating a cross-country. What is the combined understanding?

A. The heading indicator senses the magnetic field directly and never drifts

B. The heading indicator is gyroscopic and precesses, requiring resetting to the magnetic compass

C. The heading indicator is a pitot-static instrument affected by altitude

91. A pilot must determine the right action for an inoperative item not required for the flight under §91.213(d). Which is correct?

A. Repair it before any further flight

B. Report it to the NTSB within 10 days

C. Remove or deactivate and placard it "Inoperative"

92. A pilot recognizes the danger of relying solely on the airspeed indicator to avoid a stall in a steep turn near terrain. What is the combined understanding?

A. The airspeed indicator is always inaccurate in turns

B. Stall speed never changes, so the indicator is sufficient

C. The wing can stall at any airspeed if the critical angle is exceeded; respect the angle of attack

93. A pilot must determine the minimum medical class for commercial privileges and connect it to a for-hire flight. Which is correct?

A. At least a second-class medical is required for commercial for-hire privileges

B. A third-class medical is sufficient for commercial for-hire flights

C. A first-class medical is required for all commercial flights

94. A pilot recognizes that a microburst causes a shift from headwind to downdraft and tailwind on approach near a thunderstorm. What two-part action is correct?

A. Continue the approach and add aft elevator

B. Reduce power to settle onto the runway

C. Avoid the area and delay or divert until the hazard passes

95. A pilot must determine the VFR transponder code when not assigned a discrete code while also recalling the emergency code. Which pairing is correct?

A. 1200 for emergency, 7700 for VFR

B. 1200 for VFR, 7700 for emergency

C. 7600 for VFR, 7500 for emergency

96. A pilot recognizes that an aircraft for hire requires both an annual and a 100-hour inspection while scheduling maintenance. What is the combined understanding?

A. Only the annual is required for for-hire aircraft

B. Both the annual (12 months) and the 100-hour (for hire) inspections are required

C. The 100-hour satisfies the annual requirement

97. A pilot must determine the lost-procedure first step while disoriented over unfamiliar terrain near rising ground. Which is correct?

A. Climb to improve reception, range, and terrain clearance

B. Descend to read ground features

C. Continue on the last heading

98. A pilot recognizes that holding out to the public for hire is the element confirming common carriage while evaluating a job offer. What is the combined understanding?

A. Holding out, with transport for hire point-to-point, confirms common carriage requiring Part 119

B. Holding out is irrelevant if the flight is under 50 NM

C. Common carriage requires only a commercial certificate

99. A pilot must determine the effect of a blocked pitot tube on the airspeed indicator during a climb. Which is correct?

A. The airspeed reads zero immediately

B. The airspeed reads a constant accurate value

C. The airspeed behaves like an altimeter, reading higher in the climb

100. A pilot recognizes that best glide speed should be established immediately after an engine failure while selecting a landing site. What is the combined understanding?

A. Establish best glide to maximize distance, then select a site within glide range

B. Establish maneuvering speed and descend rapidly

C. Attempt a restart before establishing any glide speed

101. A pilot must determine the cloud-clearance requirement at 11,000 feet MSL in Class E while planning a high cruise. Which is correct?

A. 500 below, 1,000 above, 2,000 horizontal

B. 1,000 below, 1,000 above, 1 SM horizontal

C. Clear of clouds

102. A pilot recognizes that the 8-hours bottle-to-throttle rule and the 0.04% BAC limit both apply before a commercial flight. What is the combined understanding?

A. Only the 8-hour rule applies, with no BAC limit

B. At least 8 hours and a BAC below 0.04%, and not under the influence

C. A 12-hour wait with any BAC is sufficient

103. A pilot must determine the right of way priority of a balloon relative to an airplane while both approach an airport. Which is correct?

A. The airplane has priority over the balloon

B. They share equal priority

C. The balloon, being least maneuverable, has the right of way over the airplane

104. A pilot recognizes that density altitude is the master predictor of performance while planning a hot, high takeoff with a constant-speed propeller. What is the combined understanding?

A. High density altitude degrades performance; use high RPM and compute margins

B. Density altitude has no effect with a constant-speed propeller

C. High density altitude improves climb performance

105. A pilot must determine the final readiness standard for the CAX while reviewing simulation exam scores. Which is correct?

A. A 70% score guarantees a short checkride

B. Any passing score is sufficient with no further review

C. Consistently scoring 85% or higher indicates readiness with headroom above the 70% pass line

Exam 8 Answer Key with Full Answer Explanations

1. C — The certificate limitation prohibiting passenger-for-hire at night governs; a non-instrument-rated commercial pilot may not carry passengers for hire at night regardless of distance. The narrow spread is a weather concern, not a legal bar, and the distance limit applies separately. The night limitation alone makes the flight impermissible.

2. B — The pilot should shed loads and land for the alternator failure, and the for-hire aircraft's 100-hour inspection is due within the next 2 hours of service (98 of 100 used). The engine running on magnetos does not excuse the electrical failure or the inspection. Both the immediate failure and the maintenance limit must be managed.

3. A — The most important combined consideration is performance margins from density altitude plus the certificate's 50-NM distance limitation for passenger-for-hire. The transponder interval and beacon color are irrelevant to this decision. Both performance and regulatory limits govern the go decision.

4. A — For a high-density-altitude obstacle departure, set high RPM/low blade angle and climb at VX to clear the obstacle over the shortest distance. Low RPM/high blade angle and reduced power are wrong for takeoff. VX maximizes obstacle clearance.

5. C — The ceiling is the lowest broken or overcast layer, so BKN008 makes it 800 feet, below the 1,000-foot personal minimum; the decision is to divert. There is a ceiling, and it is below minimums. Personal minimums drive the diversion.

6. B — A 60° bank produces a 2 G load factor, which raises stall speed by about 41% ($\sqrt{2}$). Reduced weight, forward CG, ground effect, and wake turbulence are not the explanation. The load factor and stall-speed relationship explain the near-stall.

7. C — The magnetos and vacuum system are independent of the electrical system, so the engine and vacuum-driven attitude indicator keep working while the electric radios die. The battery does not power the gyros, and the pitot-static system is unrelated. System independence explains the outcome.

8. A — An in-flight fire requires immediate notification to the NTSB under Part 830, regardless of the Part 91 commercial operation. It is not an FAA-only or no-report event. Immediate NTSB notification is required.

9. A — Apply carburetor heat for the icing (which can occur at 70°F with humidity) and prepare for possible fog at the destination signaled by the narrowing spread. Leaning or climbing does not address these hazards. Both the carb ice and the fog risk must be managed.

10. B — Crossing an active restricted area requires permission from the controlling agency, and operating above 14,000 feet cabin altitude requires continuous crew oxygen. A transponder alone or oxygen only above 15,000 feet is insufficient. Both requirements apply.

11. C — The leg time is 100 ÷ 200 = 0.5 hour = 30 minutes, and the active TFR must be avoided by rerouting. A clearance to enter a TFR is not the correct response. Reroute around the TFR.

12. B — Apply the macho antidote "Taking chances is foolish" and reduce the load to within gross weight; an overweight airplane on a short, high-density-altitude runway is unsafe. Departing on an in-limits CG or adding power does not make it safe. Reducing the load is the correct response.

13. A — Flying the public point-to-point for a fee is illegal common carriage, and the night passenger-for-hire limitation also applies to a non-instrument-rated pilot. Both reasons make it impermissible, and there is no under-50-NM exemption from common carriage. Two independent bars apply.

14. B — Shed electrical loads for the alternator failure and divert before the ceiling drops further. Continuing to monitor or trying to "restore" the alternator with RPM is unsafe. Both the electrical and weather situations call for landing.

15. C — With the altimeter below 29.92, pressure altitude is higher than field elevation, and the crew-oxygen rule applies above 12,500 feet for time beyond 30 minutes. The other options misstate both the pressure-altitude relationship and the oxygen rule. Both facts combine in the answer.

16. B — Cross the ridge at about 45° with generous altitude, set high RPM, and expect lee-side downdrafts. Crossing perpendicular at low altitude or downwind with reduced power is dangerous. The combined technique preserves an escape and power margin.

17. A — Using the alternate static source (cabin pressure) causes the altimeter to read slightly high and the airspeed slightly fast. It does not tumble the attitude indicator or fail the vacuum system. Knowing these biases prevents misreading.

18. B — Keep the turn coordinated, respect the angle of attack to avoid a stall-spin, and avoid the thunderstorm by 20 NM. Tightening the turn with rudder or adding aft elevator invites a spin, and flying toward the storm is dangerous. Both hazards are addressed.

19. C — Head-on, both aircraft alter course to the right, and a VFR pilot may transit an active MOA with caution. The left-aircraft rule does not apply head-on, and the MOA does not bar VFR flight. Both rules combine correctly.

20. C — Being within CG is not enough; the airplane is overweight and unsafe, especially at high density altitude, so the load must be reduced. An in-limits CG does not authorize an overweight takeoff. Both weight and balance, plus density altitude, govern.

21. A — Shut off the cabin heat and ventilate for the suspected CO, and divert before the weather worsens. Increasing heat or ignoring the symptoms compounds the danger. Both the CO and weather hazards call for action.

22. A — Cruise fuel is 11 × 2 = 22 gallons, and a 45-minute night reserve must be added for a night VFR flight. A 30-minute reserve is for day VFR. The night reserve is 45 minutes.

23. C — An aft CG beyond the limit degrades stall and spin recovery, making it the most dangerous time to be out of limits. A forward CG raises stall speed but aids recovery, the opposite of an aft CG. The aft-CG recovery hazard is the key point.

24. B — The SIGMET warns all aircraft of severe icing, and structural icing conditions (visible moisture at 0°C) are present, confirming the hazard for an airplane without anti-ice. The airplane is not equipped, and the temperature is relevant. Both factors confirm the danger.

25. B — A 60° bank's 2 G load raises stall speed about 41%, and exceeding maneuvering speed (VA) risks structural overstress. Load factor increases with bank, and VA is relevant. Both the stall-speed and structural points combine.

26. C — With only FEW and SCT layers, there is no ceiling, and VFR in Class D requires 3 SM visibility with 500/1,000/2,000 cloud clearance. FEW and SCT are not ceilings, so no IFR clearance is forced by a ceiling. The VFR minimums apply.

27. A — No RPM drop on one magneto indicates a grounding problem requiring maintenance before the for-hire flight. It is not a healthy magneto or a governor failure. Resolve the discrepancy before departing with a passenger.

28. C — Above 14,000 feet cabin altitude the crew must use oxygen the entire time, and true airspeed exceeds indicated at altitude. Oxygen is required there, and indicated does not exceed true. Both the oxygen rule and the airspeed relationship combine.

29. B — The glider has the right of way over the airplane, and the narrowing spread suggests fog may form. The airplane does not have priority, and visibility is not improving. Both the right-of-way and weather points combine.

30. B — Position lights (red left, green right, white tail) are required at night, and a vacuum failure makes the attitude indicator unreliable. The lights are not optional, and the vacuum failure does not stop the engine. Both facts combine.

31. A — Report a change of permanent address within 30 days (§61.60), and the flight review is valid for 24 calendar months. The 7-day/12-month figures are incorrect. Both deadlines combine.

32. C — Add power (advancing the propeller then throttle as needed) and go around to escape the microburst wind shear. Reducing power or adding aft elevator can lead to a stall or terrain contact. The go-around escapes the shear.

33. A — Class C requires 500 below, 1,000 above, 2,000 horizontal cloud clearance, while Class B requires only clear of clouds. They are not both clear-of-clouds or both 1,000/1,000/1 SM. Each class has its own clearance.

34. A — Standard temperature at 3,000 feet is 15 − 6 = 9°C, and the 21°C deviation (30 − 9) adds about 2,520 feet to density altitude. The other options misstate the standard temperature. Both the standard temp and density-altitude increase are correct.

35. B — Banner towing requires a Certificate of Waiver or Authorization, and §91.119 minimum altitudes apply over congested areas, so the job is impermissible without the waiver. A commercial certificate alone is insufficient, and the waiver does matter. Both the waiver and altitude rule apply.

36. C — Lost comms near a towered airport at night calls for squawking 7600 and watching for light gun signals while maintaining position lights. Squawking 1200 or 7700 and landing on any runway is wrong. The lost-comm procedure governs.

37. C — A forward CG raises stall speed and reduces elevator authority in the flare, explaining the flare difficulty. It does not lower stall speed, and the issue is forward, not aft, CG. The forward-CG flare effect is the explanation.

38. A — AIRMET Zulu covers icing and freezing levels, and visible moisture at or below 0°C produces structural ice, confirming the risk for an airplane without anti-ice. Tango and Sierra cover different hazards, and the temperature matters. Both factors confirm the icing risk.

39. B — Acknowledge the get-there-itis bias, divert to refuel, and avoid the microburst. Continuing to land quickly or speeding up lets the bias drive an unsafe outcome. Both the fuel and microburst hazards call for diverting.

40. B — The second-class medical supports commercial privileges, but the instrument-rating limitation still bars night passenger-for-hire for a non-instrument-rated pilot. The medical does not remove the limitation, and third class is insufficient for commercial. Both the medical and the limitation combine.

41. C — Both weight and CG must be within limits, and high density altitude further degrades performance. An in-limits CG alone is insufficient, and CG is not irrelevant. All three factors govern the takeoff decision.

42. A — Widen the route to at least 20 NM from the mature-stage thunderstorm, the most hazardous stage. Continuing at 15 NM or flying beneath the storm is dangerous. The 20-NM rule and mature-stage hazard combine.

43. A — The ARROW documents are required aboard, and the airworthiness certificate must be displayed. Only the registration is not the displayed document, and the logbook is not required aboard. Both the document set and the display requirement combine.

44. C — Cross-check the remaining instruments using partial-panel technique and trust them when the attitude indicator fails in disorientation. Trusting the failing instrument or bodily sensations, or closing the eyes, is dangerous. Partial-panel instrument trust is the response.

45. B — IFR fuel requires enough to reach the destination, then the alternate, plus a 45-minute reserve. A 30-minute reserve or destination-only fuel is insufficient. The IFR reserve includes the alternate plus 45 minutes.

46. C — Verify the gear is down and locked (three green) and complete the GUMPS check when the warning horn sounds. Silencing or ignoring the horn risks a gear-up landing. The horn signals a gear check.

47. A — A solid blue boundary is Class B, requiring an explicit ATC clearance, with Mode C required within the 30-NM veil. Class C needs a transponder and communication, and Class D does not require an IFR clearance. Both the clearance and transponder requirements combine.

48. C — Detonation is abnormal explosive combustion aggravated by high power and temperature; the response is to reduce power and enrich the mixture. It is not normal combustion or identical to preignition. Reducing power and enriching addresses the cause.

49. B — The overtaken aircraft has the right of way; the overtaking aircraft passes to the right and watches the lowering visibility. The overtaking aircraft does not have priority or pass left. Both the right-of-way rule and the weather awareness combine.

50. B — The thinner air at altitude makes the full-rich mixture too rich, so leaning restores the proper ratio. The mixture is not too lean, and the magnetos have not failed. Leaning corrects the over-rich condition.

51. A — A required inoperative instrument must be resolved before flight; it cannot simply be placarded and flown. Departing with the passenger or fixing it at the destination is not permitted. Required-equipment logic governs.

52. B — "It could happen to me" counters the invulnerability attitude; the correct action is to avoid the thunderstorms and reroute. Macho and resignation have different antidotes, and penetrating or continuing is unsafe. The attitude and avoidance combine.

53. C — The standard pattern uses left turns (unless indicated) at 1,000 feet AGL, announced on the CTAF at a non-towered airport. Right turns at 500 feet on center frequency, or straight-in with no calls, are wrong. The standard pattern and CTAF combine.

54. C — A temperature inversion produces wind shear at its top and traps reduced visibility below. It does not cause severe icing or engine power loss at the boundary, and visibility is reduced, not improving. Both hazards combine.

55. A — The VFR day fuel reserve is enough to reach the destination plus 30 minutes at normal cruise. It is not 45 minutes at maximum power or zero reserve. Normal cruise is the basis.

56. B — A tailwind increases both takeoff and landing distances, compounding the high-density-altitude penalty. It does not decrease the distances or have no effect. Both effects worsen performance.

57. A — The gear warning horn sounds when the throttle is retarded with the gear not down and locked; the pilot verifies three green. It does not indicate flaps or mixture. The horn prompts a gear verification.

58. A — Divert or land before the ceiling drops and fog forms from the narrowing spread. Continuing beneath the clouds or climbing into them is unsafe. Both the ceiling and fog risks call for landing or diverting.

59. B — Between 12,500 and 14,000 feet cabin altitude, the crew must use oxygen for the time exceeding 30 minutes, so a 45-minute exposure requires it for the excess. No oxygen, or oxygen the entire time, is incorrect here. The 30-minute trigger governs.

60. C — Best glide, near L/Dmax, gives the maximum gliding distance to reach a landing site, and should be established immediately. It is not the never-exceed or maneuvering speed. Best glide maximizes reachable sites.

61. C — Obtain permission for the active restricted area, and the VOR check is required within 30 days for IFR. Entering freely or a 90-day/12-month VOR check is wrong. Both requirements combine.

62. B — Set the OBS to match the direction of flight to resolve reverse sensing, then proceed with the diversion. Replacing the receiver or ignoring the CDI is not the fix. Matching the OBS resolves reverse sensing.

63. A — A 60-NM daytime passenger-for-hire flight is prohibited, since it exceeds the 50-NM limit for a non-instrument-rated commercial pilot. The limitation applies to over-50-NM as well as night, and distance does matter. The distance limit bars the flight.

64. A — The mature stage has both updrafts and downdrafts, and a microburst causes severe low-level wind shear. The cumulus stage is not the most dangerous, and microbursts are not harmless. Both hazards combine.

65. C — The ceiling is the lowest broken or overcast layer. SCT020 is scattered (not a ceiling), so the lowest broken or overcast layer is BKN035 at 3,500 feet AGL. The OVC060 layer is higher and not the ceiling.

66. B — The wing can stall in a steep turn above the published stall speed if the critical angle is exceeded, because the load factor raises the actual stall speed. It is not true that the wing cannot stall above book stall speed, and stall speed does change with bank. Angle of attack governs the stall.

67. C — The radio station license is not required for domestic flight; it is needed only for international operations. The airworthiness certificate and operating limitations are required domestically. The radio license is the excluded item.

68. A — CO from a cracked exhaust feeding the cabin heater causes hypemic hypoxia by impairing the blood's oxygen-carrying ability. It is not hypoxic hypoxia limited to altitude, and it is dangerous at low altitude. The CO/hypemic-hypoxia link is the point.

69. C — The 100-hour inspection may be exceeded by up to 10 hours to reach a maintenance facility, and the excess is included in the next interval. It is not 25 hours forgiven or a fresh restart. The 10-hour allowance with carryover applies.

70. B — "Follow the rules; they are usually right" counters the anti-authority attitude; the action is to comply with the TFR and reroute. Impulsivity and macho have different antidotes, and busting the TFR is unsafe. The attitude and compliance combine.

71. B — Class E airspace at or above 10,000 feet MSL (11,000 here) requires 5 SM visibility with 1,000/1,000/1-SM cloud clearance. The 3 SM/500-1,000-2,000 set applies below 10,000. The higher minimums apply at 11,000.

72. A — Increase RPM (propeller) first, then manifold pressure (throttle), and expect reduced performance at high density altitude. The reverse order or changing only the mixture is wrong. Both the power sequence and the altitude effect combine.

73. B — A flight that holds out to the public for hire is common carriage requiring an air carrier certificate under Part 119. A commercial certificate alone is insufficient, and there is no under-50-NM exemption. Holding out triggers the certificate requirement.

74. C — IFR requires a 45-minute reserve plus fuel to the alternate, and night VFR requires 45 minutes; both reserves apply to a night IFR flight to a destination needing an alternate. A 30-minute reserve or VFR-only application is wrong. The 45-minute reserves and alternate fuel combine.

75. B — Humid air is less dense than dry air, raising density altitude and degrading performance on a hot, humid day. It is not denser or without effect. Humidity worsens density altitude.

76. A — The magnetos are independent of the electrical system, so the engine runs even with the master switch off. The battery does not power the spark plugs, and the alternator does not supply spark. Magneto independence explains it.

77. A — An aircraft in distress has priority over all other aircraft, and the thunderstorm must be avoided by 20 NM. The distress aircraft does not yield or share priority. Both the right-of-way and avoidance points combine.

78. C — VLO governs operating (extending/retracting) the gear, and VLE governs flying with it extended. They are not identical or reversed. The two speeds govern different gear situations.

79. A — Standard sea-level conditions are 29.92 in. Hg and 15°C. The other values are incorrect. These anchor pressure-altitude computation.

80. B — A forward CG increases stability and raises stall speed, and may make the flare harder due to reduced elevator authority. It does not decrease stability or lower stall speed. The forward-CG effects combine.

81. A — Use the alternate static source when the static port blocks, expecting the altimeter to read slightly high. Switching magnetos or increasing RPM does nothing for a blocked static port. The alternate static source restores the instruments.

82. C — AIRMET Tango covers moderate turbulence, strong surface winds, and low-level wind shear. Sierra covers IFR/mountain obscuration, and Zulu covers icing. Tango matches the wind hazard.

83. C — Squawk 7700 for an emergency and 7600 for lost communications. The reversed pairing or 1200-for-emergency is wrong. The two codes are distinct.

84. B — Landing behind a heavy jet, stay at or above its flight path and land beyond its touchdown point to avoid the sinking vortices. Landing before its touchdown point or matching its path enters the wake. Staying above is the avoidance principle.

85. B — Above 15,000 feet cabin altitude, supplemental oxygen must be provided to each occupant. It is not optional for passengers, and not only the pilot needs it. The provide-to-passengers rule applies.

86. A — A spin requires both a stalled wing and yaw; recovery uses the PARE procedure. High airspeed alone or an aft CG is not the requirement. The stall-plus-yaw requirement and PARE recovery combine.

87. C — Climb at VX with high RPM/low blade angle to clear an obstacle on a constant-speed-propeller takeoff. VY with low RPM or maneuvering speed is wrong for obstacle clearance. VX and the takeoff propeller setting combine.

88. A — A special flight permit (ferry permit) is required to fly an unairworthy-but-safe airplane to maintenance. A medical or flight review does not authorize the flight. The ferry permit addresses this situation.

89. B — Class B requires clear of clouds, while Class E below 10,000 feet requires 500/1,000/2,000 cloud clearance. They are not both clear-of-clouds or both 1,000/1,000/1 SM. Each class has its own requirement.

90. B — The heading indicator is gyroscopic and precesses, requiring periodic resetting to the magnetic compass. It does not sense the field directly or depend on altitude. Precession requires resetting.

91. C — An inoperative item not required for the flight must be removed or deactivated and placarded "Inoperative" under §91.213(d). It need not be repaired before flight or reported to the NTSB. Placarding governs.

92. C — The wing can stall at any airspeed if the critical angle is exceeded, so the pilot must respect the angle of attack rather than rely on the airspeed indicator. The indicator is not always inaccurate, and stall speed does change. Angle of attack governs the stall.

93. A — At least a second-class medical is required for commercial for-hire privileges. Third class is insufficient, and first class is the ATP standard. Second class is the commercial minimum.

94. C — Avoid the area and delay or divert until the microburst hazard passes. Continuing with aft elevator or reducing power is dangerous in the wind shear. Avoidance is the only defense.

95. B — The VFR code when not assigned a discrete code is 1200, and the emergency code is 7700. The reversed or 7600/7500 pairing is wrong. The two codes are distinct.

96. B — A for-hire aircraft requires both the annual (every 12 months) and the 100-hour (for hire) inspections. The annual alone is insufficient, and a 100-hour does not satisfy the annual. Both inspections apply.

97. A — The first lost-procedure step is to climb to improve reception, range, and terrain clearance. Descending or continuing on the last heading narrows the options. Climbing extends the airplane's reach.

98. A — Holding out, with transport for hire point-to-point, confirms common carriage requiring Part 119. Holding out is not irrelevant under 50 NM, and a commercial certificate alone is insufficient. Holding out completes the common-carriage test.

99. C — A blocked pitot tube (with the drain blocked) causes the airspeed indicator to behave like an altimeter, reading higher in a climb. It does not read zero or a constant accurate value. The blocked-pitot behavior is the answer.

100. A — Establish best glide immediately after an engine failure to maximize distance, then select a landing site within glide range. Maneuvering speed or attempting a restart before establishing glide is wrong. Best glide first, then site selection.

101. B — Class E at 11,000 feet MSL (at or above 10,000) requires 1,000 below, 1,000 above, 1 SM horizontal cloud clearance. The 500/1,000/2,000 set applies below 10,000, and clear-of-clouds applies to Class B. The larger clearance applies at 11,000.

102. B — At least 8 hours from bottle to throttle, a BAC below 0.04%, and not being under the influence are all required. The 8-hour rule alone or a 12-hour-with-any-BAC standard is incorrect. The 8-hour/0.04% standard governs.

103. C — A balloon, being the least maneuverable, has the right of way over an airplane. The airplane does not have priority, and they do not share equal priority. Less maneuverable aircraft have priority.

104. A — High density altitude degrades performance; the pilot should use high RPM and compute margins for a hot, high takeoff. Density altitude does affect a constant-speed propeller and does not improve climb. The performance penalty and high-RPM setting combine.

105. C — Consistently scoring 85% or higher indicates readiness with headroom above the 70% pass line and a shorter checkride oral. A 70% score does not guarantee a short checkride, and not every passing score signals readiness. The 85% benchmark is the readiness standard.