

08/07/2008

Bank: (Commercial Pilot)

Airman Knowledge Test Question Bank

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1. PLT310 COM

Load factor is the lift generated by the wings of an aircraft at any given time

- A) divided by the total weight of the aircraft.
- B) multiplied by the total weight of the aircraft.
- C) divided by the basic empty weight of the aircraft.

2. PLT312 COM

(Refer to figure 5.) The vertical line from point D to point G is represented on the airspeed indicator by the maximum speed limit of the

- A) green arc.
- B) yellow arc.
- C) white arc.

3. PLT242 COM

Lift on a wing is most properly defined as the

- A) force acting perpendicular to the relative wind.
- B) differential pressure acting perpendicular to the chord of the wing.
- C) reduced pressure resulting from a laminar flow over the upper camber of an airfoil, which acts perpendicular to the mean camber.

4. PLT351 COM

What performance is characteristic of flight at maximum lift/drag ratio in a propeller-driven airplane?
Maximum

- A) gain in altitude over a given distance.
- B) range and maximum distance glide.
- C) coefficient of lift and minimum coefficient of drag.

5. PLT240 COM

Recovery from a stall in any airplane becomes more difficult when its

- A) center of gravity moves forward.
- B) elevator trim is adjusted nosedown.
- C) center of gravity moves aft.

6. PLT120 COM

The need to slow an aircraft below VA is brought about by the following weather phenomenon:

- A) High density altitude which increases the indicated stall speed.
- B) Turbulence which causes an increase in stall speed.
- C) Turbulence which causes a decrease in stall speed.

7. PLT008 COM

(Refer to figure 35.)

GIVEN:

Temperature	85 °F
Pressure altitude	6,000 ft
Weight	2,800 lb
Headwind	14 kts

Determine the approximate ground roll.

- A) 742 feet.
- B) 1,280 feet.
- C) 1,480 feet.

8. PLT002 COM

(Refer to figure 2.) Select the correct statement regarding stall speeds. The airplane will stall

- A) 10 knots higher in a power-on, 60° bank, with gear and flaps up, than with gear and flaps down.
- B) 25 knots lower in a power-off, flaps-up, 60° bank, than in a power-off, flaps-down, wings-level configuration.
- C) 10 knots higher in a 45° bank, power-on stall, than in a wings-level stall with flaps up.

9. PLT105 COM

Which is true regarding the use of airborne weather-avoidance radar for the recognition of certain weather conditions?

- A) The radar scope provides no assurance of avoiding instrument weather conditions.
- B) The avoidance of hail is assured when flying between and just clear of the most intense echoes.
- C) The clear area between intense echoes indicates that visual sighting of storms can be maintained when flying between the echoes.

10. PLT305 COM

Which is true regarding the use of flaps during level turns?

- A) The lowering of flaps increases the stall speed.
- B) The raising of flaps increases the stall speed.
- C) Raising flaps will require added forward pressure on the yoke or stick.

11. PLT088 COM

Which airspeed would a pilot be unable to identify by the color coding of an airspeed indicator?

- A) The never-exceed speed.
- B) The power-off stall speed.
- C) The maneuvering speed.

12. PLT166 COM

To determine pressure altitude prior to takeoff, the altimeter should be set to

- A) the current altimeter setting.
- B) 29.92 inches Hg and the altimeter indication noted.
- C) the field elevation and the pressure reading in the altimeter setting window noted.

13. PLT136 COM

During preflight in cold weather, crankcase breather lines should receive special attention because they are susceptible to being clogged by

- A) congealed oil from the crankcase.
- B) moisture from the outside air which has frozen.
- C) ice from crankcase vapors that have condensed and subsequently frozen.

14. PLT126 COM

If necessary to take off from a slushy runway, the freezing of landing gear mechanisms can be minimized by

- A) recycling the gear.
- B) delaying gear retraction.
- C) increasing the airspeed to VLE before retraction.

15. PLT343 COM

The mixture control can be adjusted, which

- A) prevents the fuel/air combination from becoming too rich at higher altitudes.
- B) regulates the amount of air flow through the carburetor's venturi.
- C) prevents the fuel/air combination from becoming lean as the airplane climbs.

16. PLT343 COM

Fouling of spark plugs is more apt to occur if the aircraft

- A) gains altitude with no mixture adjustment.
- B) descends from altitude with no mixture adjustment.
- C) throttle is advanced very abruptly.

17. PLT350 COM

In aircraft equipped with constant-speed propellers and normally-aspirated engines, which procedure should be used to avoid placing undue stress on the engine components? When power is being

- A) decreased, reduce the RPM before reducing the manifold pressure.
- B) increased, increase the RPM before increasing the manifold pressure.
- C) increased or decreased, the RPM should be adjusted before the manifold pressure.

18. PLT350 COM

Which statement best describes the operating principle of a constant-speed propeller?

- A) As throttle setting is changed by the pilot, the prop governor causes pitch angle of the propeller blades to remain unchanged.
- B) A high blade angle, or increased pitch, reduces the propeller drag and allows more engine power for takeoffs.
- C) The propeller control regulates the engine RPM, and in turn, the propeller RPM.

19. PLT140 COM

What is the minimum visibility and ceiling required for a pilot to receive a 'land and hold short' clearance?

- A) 3 nautical miles and 1,000 feet.
- B) 3 statute miles and 1,000 feet.
- C) 3 statute miles and 1,500 feet.

20. PLT141 COM

(Refer to figure 60.) Sign "1" is an indication

- A) of an area where aircraft are prohibited.
- B) that the taxiway does not continue.
- C) of the general taxiing direction to a taxiway.

21. PLT040 COM

(Refer to figure 52, point 9) The alert area depicted within the blue lines is an area in which

- A) there is a high volume of pilot training activities or an unusual type of aerial activity, neither of which is hazardous to aircraft.
- B) the flight of aircraft is prohibited.

C) the flight of aircraft, while not prohibited, is subject to restriction.

22. PLT194 COM

When in the vicinity of a VOR which is being used for navigation on VFR flights, it is important to

A) make 90° left and right turns to scan for other traffic.

B) exercise sustained vigilance to avoid aircraft that may be converging on the VOR from other directions.

C) pass the VOR on the right side of the radial to allow room for aircraft flying in the opposite direction on the same radial.

23. PLT208 COM

When planning for an emergency landing at night, one of the primary considerations should include

A) turning off all electrical switches to save battery power for the landing.

B) selecting a landing area close to public access, if possible.

C) landing without flaps to ensure a nose-high landing attitude at touchdown.

24. PLT509 COM

During a takeoff made behind a departing large jet airplane, the pilot can minimize the hazard of wingtip vortices by

A) being airborne prior to reaching the jet's flightpath until able to turn clear of its wake.

B) maintaining extra speed on takeoff and climbout.

C) extending the takeoff roll and not rotating until well beyond the jet's rotation point.

25. PLT482 COM

Proper quizzing by the instructor during a lesson can have which of these results?

A) It identifies points which need emphasis.

B) It encourages rote response from students.

C) It permits the introduction of new material which was not covered previously.

26. PLT491 COM

Evaluation of student performance and accomplishment during a lesson should be based on the

A) student's background and past experiences.

B) objectives and goals that were established in the lesson plan.

C) student's actual performance as compared to an arbitrary standard.

27. PLT488 COM

In a 'guided discussion,' lead-off questions should usually begin with

A) 'why ...'

B) 'when ...'

C) 'where ...'

28. PLT103 COM

Most pilots have fallen prey to dangerous tendencies or behavior problems at some time. Some of these dangerous tendencies or behavior patterns which must be identified and eliminated include:

- A) Deficiencies in instrument skills and knowledge of aircraft systems or limitations.
- B) Peer pressure, get-there-itis, loss of positional or situation awareness, and operating without adequate fuel reserves.
- C) Performance deficiencies from human factors such as, fatigue, illness or emotional problems.

29. PLT022 COM

An early part of the Aeronautical Decision Making (ADM) process involves

- A) taking a self-assessment hazardous attitude inventory test.
- B) understanding the drive to have the 'right stuff.'
- C) obtaining proper flight instruction and experience during training.

30. PLT104 COM

While on an IFR flight, a pilot emerges from a cloud to find himself within 300 feet of a helicopter. Which of the following alternatives best illustrates the 'MACHO' reaction?

- A) He is not too concerned; everything will be alright.
- B) He flies a little closer, just to show him.
- C) He quickly turns away and dives, to avoid collision.

31. PLT272 COM

To help manage cockpit stress, pilots must

- A) condition themselves to relax and think rationally when stress appears.
- B) be aware of life stress situations that are similar to those in flying.
- C) avoid situations that will improve their abilities to handle cockpit responsibilities.

32. PLT503 COM

Which is true regarding the presence of alcohol within the human body?

- A) A small amount of alcohol increases vision acuity.
- B) An increase in altitude decreases the adverse effect of alcohol.
- C) Judgment and decision-making abilities can be adversely affected by even small amounts of alcohol.

33. PLT096 COM

Hypoxia is the result of which of these conditions?

- A) Excessive oxygen in the bloodstream.

- B) Insufficient oxygen reaching the brain.
- C) Excessive carbon dioxide in the bloodstream.

34. PLT083 COM

(Refer to figure 30.) What minimum navigation equipment is required to complete the VOR/DME-A procedure?

- A) One VOR receiver.
- B) One VOR receiver and DME.
- C) Two VOR receivers and DME.

35. PLT170 COM

Pilots are not authorized to land an aircraft from an instrument approach unless the

- A) flight visibility is at, or exceeds the visibility prescribed in the approach procedure being used.
- B) flight visibility and ceiling are at, or exceeds the minimums prescribed in the approach being used.
- C) visual approach slope indicator and runway references are distinctly visible to the pilot.

36. PLT293 COM

Which is true regarding the use of a Instrument Departure Procedure (DP) chart?

- A) At airfields where DP's have been established, DP usage is mandatory for IFR departures.
- B) To use a DP, the pilot must possess at least the textual description of the approved standard departure.
- C) To use a DP, the pilot must possess both the textual and graphic form of the approved standard departure.

37. PLT224 COM

For IFR operations off established airways, ROUTE OF FLIGHT portion of an IFR flight plan should list VOR navigational aids which are no more than

- A) 40 miles apart.
- B) 70 miles apart.
- C) 80 miles apart.

38. PLT012 COM

GIVEN:

True course	105°
True heading	085°
True airspeed	95 kts
Groundspeed	87 kts

Determine the wind direction and speed.

- A) 020° and 32 knots.
- B) 030° and 38 knots.
- C) 200° and 32 knots.

39. PLT064 COM

True course measurements on a Sectional Aeronautical Chart should be made at a meridian near the midpoint of the course because the

- A) values of isogonic lines change from point to point.
- B) angles formed by isogonic lines and lines of latitude vary from point to point.
- C) angles formed by lines of longitude and the course line vary from point to point.

40. PLT101 COM

(Refer to figure 52, point 6) Mosier Airport is

- A) an airport restricted to use by private and recreational pilots.
- B) a restricted military stage field within restricted airspace.
- C) a nonpublic use airport.

41. PLT064 COM

(Refer to figure 52, point 4) The terrain at the obstruction approximately 8 NM east southeast of the Lincoln Airport is approximately how much higher than the airport elevation?

- A) 376 feet.
- B) 835 feet.
- C) 1,135 feet.

42. PLT014 COM

The ADF is tuned to a radiobeacon. If the magnetic heading is 040° and the relative bearing is 290°, the magnetic bearing TO that radiobeacon would be

- A) 150°.
- B) 285°.
- C) 330°.

43. PLT014 COM

If the relative bearing changes from 090° to 100° in 2.5 minutes of elapsed time, the time to the station would be

- A) 12 minutes.
- B) 15 minutes.
- C) 18 minutes.

44. PLT322 COM

(Refer to figure 20.) Using instrument group 3, if the aircraft makes a 180° turn to the left and continues straight ahead, it will intercept which radial?

- A) 135 radial.
- B) 270 radial.
- C) 360 radial.

45. PLT064 COM

(Refer to figure 55) En route on V448 from YKM VORTAC to BTG VORTAC, what minimum navigation equipment is required to identify ANGOO intersection?

- A) One VOR receiver.
- B) One VOR receiver and DME.
- C) Two VOR receivers.

46. PLT463 COM

A pilot convicted of a motor vehicle offense involving alcohol or drugs is required to provide a written report to the

- A) nearest FAA Flight Standards District Office (FSDO) within 60 days after such action.
- B) FAA Civil Aeromedical Institute (CAMI) within 60 days after the conviction.
- C) FAA Civil Aviation Security Division (AMC-700) within 60 days after such action.

47. PLT446 COM

The maximum cumulative time that an emergency locator transmitter may be operated before the rechargeable battery must be recharged is

- A) 30 minutes.
- B) 45 minutes.
- C) 60 minutes.

48. PLT405 COM

Which is required equipment for powered aircraft during VFR night flights?

- A) Flashlight with red lens, if the flight is for hire.
- B) An electric landing light, if the flight is for hire.
- C) Sensitive altimeter adjustable for barometric pressure.

49. PLT374 COM

Assuring compliance with an Airworthiness Directive is the responsibility of the

- A) pilot in command and the FAA certificated mechanic assigned to that aircraft.
- B) pilot in command of that aircraft.
- C) owner or operator of that aircraft.

50. PLT041 COM

What altimeter setting is required when operating an aircraft at 18,000 feet MSL?

- A) Current reported altimeter setting of a station along the route.
- B) Altimeter setting at the departure or destination airport.
- C) 29.92 Inches Hg.

51. PLT414 COM

A pilot flying a single-engine airplane observes a multiengine airplane approaching from the left. Which pilot should give way?

- A) Each pilot should alter course to the right.
- B) The pilot of the single-engine airplane should give way; the other airplane is to the left.
- C) The pilot of the multiengine airplane should give way; the single-engine airplane is to its right.

52. PLT377 COM

When should notification of an aircraft accident be made to the NTSB if there was substantial damage and no injuries?

- A) Immediately.
- B) Within 10 days.
- C) Within 30 days.

53. PLT475 COM

What wind conditions would you anticipate when squalls are reported at your destination?

- A) Rapid variations in windspeed of 15 knots or more between peaks and lulls.
- B) Peak gusts of at least 35 knots combined with a change in wind direction of 30° or more.
- C) Sudden increases in windspeed of at least 16 knots to a sustained speed of 22 knots or more for at least 1 minute.

54. PLT283 COM

What flight planning information can a pilot derive from Constant Pressure Analysis Charts?

- A) Winds and temperatures aloft.
- B) Clear air turbulence and icing conditions.
- C) Frontal systems and obstructions to vision aloft.

55. PLT068 COM

What weather phenomenon is implied within an area enclosed by small scalloped lines on a U.S. High-Level Significant Weather Prognostic Chart?

- A) Cirriform clouds, light to moderate turbulence, and icing.
- B) Cumulonimbus clouds, icing, and moderate or greater turbulence.
- C) Cumuliform or standing lenticular clouds, moderate to severe turbulence, and icing.

56. PLT287 COM

Dashed lines on a Surface Analysis Chart, if depicted, indicate that the pressure gradient is

- A) weak.
- B) strong.
- C) unstable.

57. PLT287 COM

Which chart provides a ready means of locating observed frontal positions and pressure centers?

- A) Surface Analysis Chart.
- B) Constant Pressure Analysis Chart.
- C) Weather Depiction Chart.

58. PLT289 COM

When total sky cover is few or scattered, the height shown on the Weather Depiction Chart is the

- A) top of the lowest layer.
- B) base of the lowest layer.
- C) base of the highest layer.

59. PLT511 COM

A moist, unstable air mass is characterized by

- A) poor visibility and smooth air.
- B) cumuliform clouds and showery precipitation.
- C) stratiform clouds and continuous precipitation.

60. PLT192 COM

What is the approximate base of the cumulus clouds if the temperature at 2,000 feet MSL is 10 °C. and the dewpoint is 1 °C?

- A) 3,000 feet MSL.
- B) 4,000 feet MSL.
- C) 6,000 feet MSL.

61. PLT192 COM

If clouds form as a result of very stable, moist air being forced to ascend a mountain slope, the clouds will be

- A) cirrus type with no vertical development or turbulence.
- B) cumulus type with considerable vertical development and turbulence.
- C) stratus type with little vertical development and little or no turbulence.

62. PLT192 COM

What determines the structure or type of clouds which will form as a result of air being forced to ascend?

- A) The method by which the air is lifted.
- B) The stability of the air before lifting occurs.
- C) The relative humidity of the air after lifting occurs.

63. PLT059 COM

Refer to the excerpt from the following METAR report:

KTUS 08004KT 4SM HZ 26/04 A2995 RMK RAE36

At approximately what altitude AGL should bases of convective-type cumuliform clouds be expected?

- A) 4,400 feet.
- B) 8,800 feet.
- C) 17,600 feet.

64. PLT192 COM

Which cloud types would indicate convective turbulence?

- A) Cirrus clouds.
- B) Nimbostratus clouds.
- C) Towering cumulus clouds.

65. PLT263 COM

Advection fog has drifted over a coastal airport during the day. What may tend to dissipate or lift this fog into low stratus clouds?

- A) Nighttime cooling.
- B) Surface radiation.
- C) Wind 15 knots or stronger.

66. PLT226 COM

A situation most conducive to the formation of advection fog is

- A) a light breeze moving colder air over a water surface.
- B) an air mass moving inland from the coastline during the winter.
- C) a warm, moist air mass settling over a cool surface under no-wind conditions.

67. PLT226 COM

In what ways do advection fog, radiation fog, and steam fog differ in their formation or location?

- A) Radiation fog is restricted to land areas; advection fog is most common along coastal areas; steam fog forms over a water surface.

B) Advection fog deepens as windspeed increases up to 20 knots; steam fog requires calm or very light wind; radiation fog forms when the ground or water cools the air by radiation.

C) Steam fog forms from moist air moving over a colder surface; advection fog requires cold air over a warmer surface; radiation fog is produced by radiational cooling of the ground.

68. PLT226 COM

Fog produced by frontal activity is a result of saturation due to

A) nocturnal cooling.

B) adiabatic cooling.

C) evaporation of precipitation.

69. PLT263 COM

Which in-flight hazard is most commonly associated with warm fronts?

A) Advection fog.

B) Radiation fog.

C) Precipitation-induced fog.

70. PLT344 COM

Ice pellets encountered during flight normally are evidence that

A) a warm front has passed.

B) a warm front is about to pass.

C) there are thunderstorms in the area.

71. PLT203 COM

Which feature is associated with the tropopause?

A) Constant height above the Earth.

B) Abrupt change in temperature lapse rate.

C) Absolute upper limit of cloud formation.

72. PLT302 COM

Which type of jetstream can be expected to cause the greater turbulence?

A) A straight jetstream associated with a low-pressure trough.

B) A curving jetstream associated with a deep low-pressure trough.

C) A jetstream occurring during the summer at the lower latitudes.

73. PLT511 COM

Which situation would most likely result in freezing precipitation? Rain falling from air which has a temperature of

A) 32 °F or less into air having a temperature of more than 32 °F.

- B) 0 °C or less into air having a temperature of 0 °C or more.
- C) more than 32 °F into air having a temperature of 32 °F or less.

74. PLT512 COM

Moisture is added to air by

- A) sublimation and condensation.
- B) evaporation and condensation.
- C) evaporation and sublimation.

75. PLT511 COM

What is indicated if ice pellets are encountered at 8,000 feet?

- A) Freezing rain at higher altitude.
- B) You are approaching an area of thunderstorms.
- C) You will encounter hail if you continue your flight.

76. PLT492 COM

From which measurement of the atmosphere can stability be determined?

- A) Atmospheric pressure.
- B) The ambient lapse rate.
- C) The dry adiabatic lapse rate.

77. PLT492 COM

Which is true regarding actual air temperature and dewpoint temperature spread? The temperature spread

- A) decreases as the relative humidity decreases.
- B) decreases as the relative humidity increases.
- C) increases as the relative humidity increases.

78. PLT492 COM

What is the standard temperature at 10,000 feet?

- A) -5 °C.
- B) -15 °C.
- C) +5 °C.

79. PLT492 COM

Every physical process of weather is accompanied by or is the result of

- A) a heat exchange.
- B) the movement of air.

C) a pressure differential.

80. PLT301 COM

Which conditions are favorable for the formation of a surface based temperature inversion?

- A) Clear, cool nights with calm or light wind.
- B) Area of unstable air rapidly transferring heat from the surface.
- C) Broad areas of cumulus clouds with smooth, level bases at the same altitude.

81. PLT495 COM

What minimum distance should exist between intense radar echoes before any attempt is made to fly between these thunderstorms?

- A) 20 miles.
- B) 30 miles.
- C) 40 miles.

82. PLT076 COM

The jet stream and associated clear air turbulence can sometimes be visually identified in flight by

- A) dust or haze at flight level.
- B) long streaks of cirrus clouds.
- C) a constant outside air temperature.

83. PLT302 COM

The strength and location of the jet stream is normally

- A) weaker and farther north in the summer.
- B) stronger and farther north in the winter.
- C) stronger and farther north in the summer.

84. PLT197 COM

In the Northern Hemisphere, the wind is deflected to the

- A) right by Coriolis force.
- B) right by surface friction.
- C) left by Coriolis force.

85. PLT240 COM

In small airplanes, normal recovery from spins may become difficult if the

- A) CG is too far rearward, and rotation is around the longitudinal axis.
- B) CG is too far rearward, and rotation is around the CG.
- C) spin is entered before the stall is fully developed.

86. PLT473 COM

One advantage nylon rope has over manila rope is that it

- A) will not stretch.
- B) is nearly three times as strong.
- C) does not tend to snap back if it breaks.

87. PLT473 COM

A pilot should be aware that drag ropes constructed of hemp or nylon

- A) should be a maximum of 100 feet long and used only in gas balloons.
- B) can be considered safe because they will not conduct electricity.
- C) can conduct electricity when contacting powerlines carrying 600 volts or more current if they are not clean and dry.

88. PLT254 COM

While in flight, ice begins forming on the outside of the fuel tank in use. This would most likely be caused by

- A) water in the fuel.
- B) a leak in the fuel line.
- C) vaporized fuel instead of liquid fuel being drawn from the tank into the main burner.

89. PLT040 COM

(Refer to figure 52, point 2)

GIVEN:

Sacramento Executive (SAC) tower reports wind 290 at 10 kts

Highest balloon flight altitude 1,200 MSL

If you depart for a 2-hour balloon flight from SAC airport (point 2), which response best describes what ATC requires of you?

- A) Your flightpath will require communications with Sacramento Executive (SAC) control tower and not with Sacramento Approach Control.
- B) You must communicate with Sacramento Approach Control because you will enter the Alert Area.
- C) You will have to contact Sacramento Approach Control.

90. PLT183 COM

To perform a normal descent in a gas balloon, it is necessary to release

- A) air.
- B) gas.
- C) ballast.

91. PLT244 COM

Vertical control of a gas balloon is accomplished by

- A) using the rip panel rope.
- B) valving gas or releasing ballast.
- C) opening and closing the appendix.

92. PLT221 COM

The weigh-off procedure is useful because the

- A) pilot can adjust the altimeter to the correct setting.
- B) ground crew can assure that downwind obstacles are cleared.
- C) pilot will learn what the equilibrium conditions are prior to being committed to fly.

93. PLT204 COM

Probably the greatest single barrier to effective communication is the

- A) use of inaccurate statements.
- B) use of abstractions by the communicator.
- C) lack of a common core of experience between communicator and receiver.

94. PLT204 COM

The effectiveness of communication between the instructor and the student is measured by the degree of

- A) motivation manifested by the student.
- B) similarity between the idea transmitted and the idea received.
- C) attention the student gives to the instructor during a lesson.

95. PLT231 COM

When under stress, normal individuals usually react

- A) with marked changes in mood on different lessons.
- B) with extreme overcooperation, painstaking self-control, and laughing or singing.
- C) by responding rapidly and exactly, often automatically, within the limits of their experience and training.

96. PLT232 COM

The overconfidence of fast learners should be corrected by

- A) high praise when no errors are made.
- B) raising the standard of performance for each lesson.
- C) providing strong, negative evaluation at the end of each lesson.

97. PLT490 COM

What should an instructor do if a student's slow progress is due to discouragement and lack of confidence?

- A) Assign subgoals which can be attained more easily than the normal learning goals.
- B) Emphasize the negative aspects of poor performance by pointing out the serious consequences.
- C) Raise the performance standards so the student will gain satisfaction in meeting higher standards.

98. PLT227 COM

What should an instructor do if a student is suspected of not fully understanding the principles involved in a task, even though the student can correctly perform the task?

- A) Require the student to apply the same elements to the performance of other tasks.
- B) Require the student to repeat the task, as necessary, until the principles are understood.
- C) Repeat demonstrating the task as necessary until the student understands the principles.

99. PLT306 COM

The level of learning at which the student becomes able to associate an element which has been learned with other blocks of learning is called the level of

- A) application.
- B) association.
- C) correlation.

100. PLT490 COM

Motivations in the form of reproof and threats should be avoided with all but the student who is

- A) bored.
- B) discouraged.
- C) overconfident.

101. PLT491 COM

In planning any instructional activity, the instructor's first consideration should be to

- A) determine the overall objectives and standards.
- B) identify the blocks of learning which make up the overall objective.
- C) establish common ground between the instructor and students.

102. PLT489 COM

The KNOWN to UNKNOWN pattern helps the instructor lead the student into new ideas and concepts by

- A) anxieties and insecurities.
- B) using something the student already knows.

C) previously held opinions, both valid and invalid.

103. PLT295 COM

Students quickly become apathetic when they

- A) understand the objective toward which they are working.
- B) are assigned goals that are difficult, but possible to attain.
- C) recognize that their instructor is poorly prepared to conduct the lesson.

104. PLT012 COM

(Refer to figure 52, point 1)

GIVEN:

Departure point Georgetown Airport (Q61)

Departure time 0637

Winds aloft forecast (FD) at your altitude 1008

At 0755, the balloon should be

- A) over Auburn Airport (AUN).
- B) over the town of Auburn.
- C) slightly west of the town of Garden Valley.

105. PLT012 COM

(Refer to figure 52, point 4) If Lincoln Regional Airport (LHM) is departed at 0630, and at 0730 the town of Newcastle is reached, the wind direction and speed would be approximately

- A) 082° at 6 knots.
- B) 082° at 17 knots.
- C) 262° at 11 knots.

106. PLT220 COM

Operation of a balloon, during the period of sunset to sunrise, requires that it be equipped and lighted with

- A) red and green position lights.
- B) a steady aviation white position light and a red or white anticollision light.
- C) approved aviation red and white lights.

107. PLT346 COM

On a balloon equipped with a blast valve, the blast valve is used for

- A) climbs only.
- B) emergencies only.
- C) control of altitude.

108. PLT253 COM

The purpose of the preheating coil as used in hot air balloons is to

- A) prevent ice from forming in the fuel lines.
- B) warm the fuel tanks for more efficient fuel flow.
- C) vaporize the fuel for more efficient burner operation.

109. PLT253 COM

The best way to determine burner BTU availability is the

- A) burner sound.
- B) tank quantity.
- C) fuel pressure gauge.

110. PLT130 COM

Propane is preferred over butane for fuel in hot air balloons because

- A) it has a higher boiling point.
- B) it has a lower boiling point.
- C) butane is very explosive under pressure.

111. PLT251 COM

For what reason is methanol added to the propane fuel of hot air balloons?

- A) As a fire retardant.
- B) As an anti-icing additive.
- C) To reduce the temperature.

112. PLT251 COM

If ample fuel is available, within which temperature range will propane fuel vaporize sufficiently to provide enough fuel pressure for burner operation during flight?

- A) 0 °F to 30 °F.
- B) 10 °F to 30 °F.
- C) 30 °F to 90 °F.

113. PLT161 COM

(Refer to figure 54, point 4) The thinner outer magenta circle depicted around San Francisco International Airport is

- A) the outer segment of Class B airspace.
- B) an area within which an appropriate transponder must be used from outside of the Class B airspace from the surface to 10,000 feet MSL.

C) a Mode C veil boundary where a balloon may penetrate without a transponder provided it remains below 8,000 feet MSL.

114. PLT064 COM

(Refer to figure 54, point 2) After departing from Byron Airport (C83) with a northeast wind, you discover you are approaching Livermore Class D airspace and flight visibility is approximately 2 1/2 miles. You must

- A) contact Livermore ATCT on 119.65 and advise of your intentions.
- B) stay below 1,200 feet to remain in Class G.
- C) stay below 700 feet to remain in Class G and land.

115. PLT208 COM

What action is most appropriate when an envelope overtemperature condition occurs?

- A) Turn the main burner OFF.
- B) Land as soon as practical.
- C) Throw all unnecessary equipment overboard.

116. PLT251 COM

Which is the proper way to detect a fuel leak?

- A) Sight.
- B) Use of smell and sound.
- C) Check fuel pressure gauge.

117. PLT251 COM

Which action would be appropriate if a small leak develops around the stem of the tank valve, and no other tanks have sufficient fuel to reach a suitable landing field?

- A) Warm the tank valve leak with your bare hand.
- B) Turn the leaking tank handle to the full-open position.
- C) Turn off the tank, then slowly reopen to reseal the seal.

118. PLT208 COM

To respond to a small leak around the stem of a Rego blast valve in a single-burner system balloon, one should

- A) turn off the fuel system and make an immediate landing.
- B) continue operating the blast valve making very small quick blasts until a good landing field appears.
- C) continue operating the blast valve, making long infrequent blasts and opening the handle slightly to reduce leakage until a good landing field appears.

119. PLT170 COM

Which precaution should be exercised if confronted with the necessity of having to land when the air is turbulent?

- A) Land in the center of the largest available field.
- B) Throw propane equipment overboard immediately prior to touchdown.
- C) Land in the trees to absorb shock forces, thus cushioning the landing.

120. PLT221 COM

When landing a balloon, what should the occupant(s) do to minimize landing shock?

- A) Be seated on the floor of the basket.
- B) Stand back-to-back and hold onto the load ring.
- C) Stand with knees slightly bent facing the direction of movement.

121. PLT221 COM

The practice of allowing the ground crew to lift the balloon into the air is

- A) a safe way to reduce stress on the envelope.
- B) unsafe because it can lead to a sudden landing at an inopportune site just after lift-off.
- C) considered to be a good operating practice when obstacles must be cleared shortly after lift-off.

122. PLT481 COM

The purpose of a critique is to

- A) identify only the student's faults and weaknesses.
- B) give a delayed evaluation of the student's performance.
- C) provide direction and guidance to raise the level of the student's performance.

123. PLT482 COM

For oral quizzing to be effective during a lesson, a question should

- A) center on only one idea.
- B) include a combination of where, how, and why.
- C) be easy for the student at that particular stage of training.

124. PLT211 COM

A written test is said to be comprehensive when it

- A) yields consistent results.
- B) includes all levels of difficulty.
- C) liberally samples whatever is being measured.

125. PLT204 COM

To communicate effectively, instructors must

- A) utilize highly organized notes.
- B) display an authoritarian attitude.
- C) display a positive, confident attitude.

126. PLT233 COM

When students become so frustrated they no longer believe it possible to work further, they usually display which defense mechanism?

- A) Aggression.
- B) Resignation.
- C) Rationalization.

127. PLT233 COM

A student who is daydreaming is engaging in the defense mechanism known as

- A) flight.
- B) substitution.
- C) rationalization.

128. PLT270 COM

Before a student can concentrate on learning, which of these human needs must be satisfied first?

- A) Social needs.
- B) Safety needs.
- C) Physical needs.

129. PLT505 COM

Instructional aids used in the teaching/learning process should be

- A) self-supporting and should require no explanation.
- B) compatible with the learning outcomes to be achieved.
- C) selected prior to developing and organizing the lesson plan.

130. PLT419 COM

Which of these instructor actions would more likely result in students becoming frustrated?

- A) Presenting a topic or maneuver in great detail.
- B) Covering up instructor mistakes or bluffing when the instructor is in doubt.
- C) Telling the students that their work is unsatisfactory without explanation.

131. PLT232 COM

What should an instructor do with a student who assumes that correction of errors is unimportant?

- A) Invent student deficiencies.
- B) Try to reduce the student's overconfidence.
- C) Raise the standards of performance, demanding greater effort.

132. PLT232 COM

Should an instructor be concerned about an apt student who makes very few mistakes?

- A) No. Some students have an innate, natural aptitude for flight.
- B) Yes. The student may assume that the correction of errors is unimportant.
- C) Yes. The student will lose confidence in the instructor if the instructor does not invent deficiencies in the student's performance.

133. PLT229 COM

The professional relationship between the instructor and the student should be based upon

- A) the need to disregard the student's personal faults, interests, or problems.
- B) setting the learning objectives very high so that the student is continually challenged.
- C) the mutual acknowledgement that they are important to each other and both are working toward the same objective.

134. PLT229 COM

Which is true regarding professionalism as an instructor?

- A) Professionalism demands a code of ethics.
- B) To achieve professionalism, actions and decisions must be limited to standard patterns and practices.
- C) Professionalism does not require extended training and preparation.

135. PLT491 COM

Which should be the first step in preparing a lecture?

- A) Organizing the material.
- B) Researching the subject.
- C) Establishing the objective and desired outcome.

136. PLT481 COM

What is the proper sequence in which the instructor should employ the four basic steps in the teaching process?

- A) Explanation, demonstration, practice, and evaluation.
- B) Explanation, trial and practice, evaluation, and review.
- C) Preparation, presentation, application, and review and evaluation.

137. PLT103 COM

Hazardous attitudes which contribute to poor pilot judgment can be effectively counteracted by

- A) taking meaningful steps to be more assertive with attitudes.
- B) early recognition of hazardous thoughts.
- C) redirecting that hazardous attitude so that appropriate action can be taken.

138. PLT161 COM

(Refer to figure 54, point 5) A balloon drifts over the town of Brentwood on a magnetic course of 185° at 10 knots. If wind conditions remain the same, after 1 hour 30 minutes the pilot

- A) with no radio aboard, must be above 2,900 feet MSL and must have an operating transponder aboard.
- B) must remain above 600 feet MSL for national security reasons.
- C) with no radio aboard, must be above 2,900 feet MSL.

139. PLT064 COM

(Refer to figure 53, point 4) A balloon departs Mendota Airport (Q84) and drifts for a period of 1 hour and 30 minutes in a wind of 230° at 10 knots. What maximum elevation figure would assure obstruction clearance during the next 1 1/2 hours of flight?

- A) 1,600 feet MSL.
- B) 3,200 feet MSL.
- C) 9,400 feet MSL.

140. PLT041 COM

(Refer to figure 52, point 5) A balloon is launched at University Airport (005) and drifts south-southwesterly toward the depicted obstruction. If the altimeter was set to the current altimeter setting upon launch, what should it indicate if the balloon is to clear the obstruction by 500 feet above its top?

- A) 510 feet MSL.
- B) 813 feet MSL.
- C) 881 feet MSL.

141. PLT101 COM

(Refer to figure 53, point 4) While drifting above the Mendota Airport (Q84) with a northwesterly wind of 8 knots, you

- A) are required to contact ATC on frequency 122.9 Mhz.
- B) should remain higher than 2,000 feet AGL until you are at least 8 NM southeast of that airport.
- C) will be over Firebaugh Airport (Q49) in approximately 1 hour.

142. PLT448 COM

A person who makes application for a commercial pilot certificate with a balloon rating, using a balloon with an airborne heater, will be

- A) authorized both airborne heater or gas balloon.
- B) limited to balloon, with an airborne heater.
- C) authorized to conduct ground and flight training in a balloon with an airborne heater or gas balloon.

143. PLT294 COM

What single reference contains information regarding a volcanic eruption, that is occurring or expected to occur?

- A) In-Flight Weather Advisories.
- B) Terminal Area Forecasts (TAF).
- C) Weather Depiction Chart.

144. PLT021 COM

What is the weight of propane?

- A) 4.2 pounds per gallon.
- B) 6.0 pounds per gallon.
- C) 7.5 pounds per gallon.

145. PLT477 COM

In which situation is a hazardous stall more likely to occur if inadequate airspeed allowance is made for wind velocity gradient?

- A) During the approach to a landing.
- B) While thermalling at high altitudes.
- C) During takeoff and climb while on aerotow.

146. PLT124 COM

A glide ratio of 22:1 with respect to the air mass will be

- A) 11:1 in a tailwind and 44:1 in a headwind.
- B) 22:1 regardless of wind direction and speed.
- C) 11:1 in a headwind and 44:1 in a tailwind.

147. PLT257 COM

The reason for retaining water ballast while thermals are strong, is to

- A) decrease forward speed.
- B) decrease cruise performance.
- C) increase cruise performance.

148. PLT123 COM

Minimum sink speed is the airspeed which results in the

- A) least loss of altitude in a given time.
- B) least loss of altitude in a given distance.
- C) shallowest glide angle in any convective situation.

149. PLT257 COM

The maximum airspeed at which abrupt and full deflection of the controls would not cause structural damage to a glider is called the

- A) speed-to-fly.
- B) maneuvering speed.
- C) never-exceed speed.

150. PLT021 COM

In regard to the location of the glider's CG and its effect on glider spin characteristics, which is true? If the CG is too far

- A) aft, a flat spin may develop.
- B) forward, spin entry will be impossible.
- C) aft, spins will degenerate into CG high-speed spirals.

151. PLT304 COM

What factors affect glider performance during launch?

- A) Density altitude at the launch airport and towline strength.
- B) Pressure altitude at the launch airport and the temperature sounding at 1,000 feet AGL.
- C) Power output of the launch mechanism and aerodynamic efficiency of the glider.

152. PLT326 COM

Select the true statement concerning oxygen systems that are often installed in sailplanes.

- A) Most civilian aircraft oxygen systems use low-pressure cylinders for oxygen storage.
- B) When aviation breathing oxygen is not available, hospital or welder's oxygen serves as a good substitute.
- C) In case of a malfunction of the main oxygen system, a bailout bottle may serve as an emergency oxygen supply.

153. PLT011 COM

The spoilers should be in what position when operating in a strong wind?

- A) Extended during both a landing roll or ground operation.
- B) Retracted during both a landing roll or ground operation.
- C) Extended during a landing roll, but retracted during a ground operation.

154. PLT473 COM

The purpose of wing spoilers is to decrease

- A) the drag.
- B) landing speed.
- C) the lift of the wing.

155. PLT215 COM

When flying on a heading of west from one thermal to the next, the airspeed is increased to the 'speed-to-fly' with the wings level. What will the conventional magnetic compass indicate while the airspeed is increasing?

- A) A turn toward the south.
- B) A turn toward the north.
- C) Straight flight on a heading of 270°.

156. PLT216 COM

Which is true concerning total energy compensators? The instrument

- A) responds to up and down air currents only.
- B) will register climbs that result from stick thermals.
- C) reacts to climbs and descents like a conventional rate-of-climb indicator.

157. PLT216 COM

The advantage of a total energy compensator is that this system

- A) includes a speed ring around the rim of the variometer.
- B) adds the effect of stick thermals to the total energy produced by thermals.
- C) reduces climb and dive errors on variometer indications caused by airspeed changes.

158. PLT445 COM

Which is true regarding the assembly of a glider for flight?

- A) It may be accomplished by the pilot.
- B) It is not required by regulations for a glider pilot to know this.
- C) It must be accomplished under the supervision of an FAA maintenance inspector.

159. PLT170 COM

A rule of thumb for flying a final approach is to maintain a speed that is

- A) twice the glider's stall speed, regardless of windspeed.
- B) twice the glider's stall speed plus half the estimated windspeed.
- C) 50 percent above the glider's stall speed plus half the estimated windspeed.

160. PLT474 COM

With regard to two or more gliders flying in the same thermal, which is true?

- A) All turns should be to the right.
- B) Turns should be in the same direction as the highest glider.
- C) Turns should be made in the same direction as the first glider to enter the thermal.

161. PLT170 COM

What corrective action should be taken during a landing if the glider pilot makes the roundout too soon while using spoilers?

- A) Leave the spoilers extended and lower the nose slightly.
- B) Retract the spoilers and leave them retracted until after touchdown.
- C) Retract the spoilers until the glider begins to settle again, then extend the spoilers.

162. PLT170 COM

Which is a recommended procedure for an off-field landing?

- A) A recommended landing site would be a pasture.
- B) Always land into the wind even if you have to land downhill on a sloping field.
- C) If the field slopes, it is usually best to land uphill, even with a tailwind.

163. PLT257 COM

During an aerotow, moving from the inside to the outside of the towplane's flightpath during a turn will cause the

- A) towline to slacken.
- B) glider's airspeed to increase, resulting in a tendency to climb.
- C) glider's airspeed to decrease, resulting in a tendency to descend.

164. PLT298 COM

The primary cause of towline slack during aerotows is

- A) poor coordination.
- B) glider acceleration.
- C) positioning the glider too high.

165. PLT496 COM

During an aerotow, is it good operating practice to release from a low-tow position?

- A) No. The tow ring may strike and damage the glider after release.
- B) No. The towline may snap forward and strike the towplane after release.
- C) Yes. Low-tow position is the correct position for releasing from the towplane.

166. PLT496 COM

During an aerotow, if slack develops in the towline, the glider pilot should correct this situation by

- A) making a shallow-banked coordinated turn to either side.
- B) increasing the glider's pitch attitude until the towline becomes taut.
- C) yawing the glider's nose to one side with rudder while keeping the wings level with the ailerons.

167. PLT496 COM

During aerotow takeoffs in crosswind conditions, the glider starts drifting downwind after becoming airborne and before the towplane lifts off. The glider pilot should

- A) not correct for a crosswind during this part of the takeoff.
- B) crab into the wind to remain in the flightpath of the towplane.
- C) hold upwind rudder in order to crab into the wind and remain in the flightpath of the towplane.

168. PLT222 COM

When should the wing runner raise the glider's wing to the level position in preparation for takeoff?

- A) When the towplane pilot fans the towplane's rudder.
- B) When the glider pilot is seated and has fastened the safety belt.
- C) After the glider pilot gives a thumbs-up signal to take up towline slack.

169. PLT298 COM

In which manner should the glider be flown while turning during an aerotow? By

- A) flying inside the towplane's flightpath.
- B) flying outside the towplane's flightpath.
- C) banking at the same point in space where the towplane banked and using the same degree of bank and rate of roll.

170. PLT401 COM

To signal the glider pilot during an aerotow to release immediately, the tow pilot will

- A) fishtail the towplane.
- B) rock the towplane's wings.
- C) alternately raise and lower the towplane's pitch attitude.

171. PLT304 COM

The towrope breaks when at the steepest segment of the climb during a winch launch. To recover to a normal gliding attitude, the pilot should

- A) relax the back stick pressure to avoid excessive loss of altitude.
- B) apply forward pressure until the buffeting sound and vibration disappear.
- C) move the stick fully forward immediately and hold it there until the nose crosses the horizon.

172. PLT496 COM

When preparing for an autotow with a strong crosswind, where should the glider and towrope be placed?

- A) Straight behind the tow car.
- B) Obliquely to the line of takeoff on the upwind side of the tow car.
- C) Obliquely to the line of takeoff on the downwind side of the tow car.

173. PLT304 COM

Which is true regarding the use of glider tow hooks?

- A) The use of a CG hook for auto or winch tows allows the sailplane greater altitude for a given line length.
- B) The use of a CG hook for aerotows allows better directional control at the start of the launch than the use of a nose hook.
- C) The use of a nose hook for an auto or winch launch reduces structural loading on the tail assembly compared to the use of a CG hook.

174. PLT304 COM

Which would cause pitch oscillations or porpoising during a winch launch?

- A) Excessive winch speed.
- B) Insufficient winch speed.
- C) Excessive slack in the towline.

175. PLT304 COM

To stop pitch oscillation during a winch launch, the pilot should

- A) increase the back pressure on the control stick and steepen the angle of climb.
- B) relax the back pressure on the control stick and shallow the angle of climb.
- C) extend and retract the spoilers several times until the oscillations subside.

176. PLT401 COM

What corrective action should a glider pilot take during takeoff if the towplane is still on the ground and the glider is airborne and drifting to the left?

- A) Crab into the wind to maintain a position directly behind the towplane.
- B) Establish a right wing-low drift correction to remain in the flightpath of the towplane.
- C) Wait until the towplane becomes airborne before attempting to establish a drift correction.

177. PLT257 COM

When flying into a strong headwind on a long final glide or a long glide back to the airport, the recommended speed to use is the

- A) best glide speed.
- B) minimum sink speed.

C) speed-to-fly plus half the estimated windspeed at the glider's flight altitude.

178. PLT494 COM

Which thermal index would predict the best probability of good soaring conditions?

- A) -10.
- B) -5.
- C) +20.

179. PLT062 COM

(Refer to figure 6.) With regard to the soundings taken at 1400 hours, from 2,500 feet to 15,000 feet, as shown on the Adiabatic Chart, what minimum surface temperature is required for instability to occur and for good thermals to develop from the surface to 15,000 feet MSL?

- A) 58 °F.
- B) 68 °F.
- C) 80 °F.

180. PLT062 COM

(Refer to figure 6.) With regard to the soundings taken at 1400 hours, between what altitudes could optimum thermalling be expected at the time of the sounding?

- A) From 2,500 to 6,000 feet.
- B) From 6,000 to 10,000 feet.
- C) From 13,000 to 15,000 feet.

181. PLT070 COM

(Refer to figure 7.) According to the lifted index and K-index shown on the Stability Chart, which area of the U.S. would have the least satisfactory conditions for thermal soaring on the day of the soundings?

- A) Southeastern.
- B) North central.
- C) Western seaboard.

182. PLT070 COM

A freezing level panel of the composite moisture stability chart is an analysis of

- A) forecast freezing level data from surface observations.
- B) forecast freezing level data from upper air observations.
- C) observed freezing level data from upper air observations.

183. PLT511 COM

Which is true regarding the effect of fronts on soaring conditions?

- A) Good soaring conditions usually exist after passage of a warm front.
- B) Excellent soaring conditions usually exist in the cold air ahead of a warm front.
- C) Frequently the air behind a cold front provides excellent soaring for several days.

184. PLT494 COM

A thermal column is rising from an asphalt parking lot and the wind is from the south at 12 knots. Which statement would be true?

- A) As altitude is gained, the best lift will be found directly above the parking lot.
- B) As altitude is gained, the center of the thermal will be found farther north of the parking lot.
- C) The slowest rate of sink would be close to the thermal and the fastest rate of sink farther from it.

185. PLT244 COM

Critical factors affecting the flight characteristics and controllability of an airship are

- A) airspeed and power.
- B) static and dynamic trim.
- C) temperature and atmospheric density.

186. PLT159 COM

Superheat is a term used to describe the condition which exists

- A) when the surrounding air is at least 10° warmer than the gas in the envelope.
- B) when the Sun heats the envelope surface to a temperature at least 10° greater than the surrounding air.
- C) relative to the difference in temperature between the gas in the envelope and the surrounding air caused by the Sun.

187. PLT153 COM

How does the pilot know when pressure height has been reached? Liquid in the gas

- A) and air manometers will fall below the normal level.
- B) manometer will fall and the liquid in the air manometer will rise above normal levels.
- C) manometer will rise and the liquid in the air manometer will fall below normal levels.

188. PLT473 COM

Damper valves should normally be kept closed during a maximum rate climb to altitude because any air forced into the system would

- A) decrease the volume of gas within the envelope.
- B) decrease the purity of the gas within the envelope.
- C) increase the amount of air to be exhausted, resulting in a lower rate of ascent.

189. PLT157 COM

When checking gas pressure (pressure height) of an airship during a climb, the air damper valves should be

- A) opened.
- B) closed.
- C) opened aft and closed forward.

190. PLT473 COM

When operating an airship with the ballonet air valve in the automatic forward position, the aft valve locks should not be engaged with either after-damper open because

- A) ballonet overinflation and rupture may occur.
- B) the aircraft will enter an excessive bow-high attitude.
- C) the aircraft will enter an excessive stern-high attitude.

191. PLT153 COM

Maximum headway in an airship is possible only under which condition?

- A) Slightly nosedown.
- B) Slightly tail down.
- C) Flying in equilibrium.

192. PLT133 COM

Which action is necessary to perform a normal descent in an airship?

- A) Valve gas.
- B) Valve air.
- C) Take air into the aft ballonets.

193. PLT208 COM

If both engines fail while en route, an airship should be

- A) brought to a condition of equilibrium as soon as possible and free-ballooned.
- B) trimmed nose-heavy to use the airship's negative dynamic lift to fly the airship down to the landing site.
- C) trimmed nose-light to use the airship's positive dynamic lift to control the angle and rate of descent to the landing site.

194. PLT208 COM

If an airship should experience failure of both engines during flight and neither engine can be restarted, what initial immediate action must the pilot take?

- A) Immediate preparations to operate the airship as a balloon are necessary.
- B) The airship must be driven down to a landing before control and envelope shape are lost.

C) The emergency auxiliary power unit must be started for electrical power to the airscoop blowers so that ballonet inflation can be maintained.

195. PLT221 COM

To land an airship that is 250 pounds heavy when the wind is calm, the best landing can usually be made if the airship is

- A) in trim.
- B) nose-heavy approximately 20°.
- C) tail-heavy approximately 20°.

196. PLT153 COM

A heavy airship flying dynamically with air ballasted forward to overcome a climbing tendency and slowed down for a weigh-off in the air prior to landing, will be very bow heavy. This condition must be corrected prior to landing by

- A) ballasting air aft.
- B) discharging forward ballast.
- C) dumping fuel from the forward tanks.

197. PLT154 COM

The purpose of a ground weigh-off is to determine the

- A) useful lift of the airship.
- B) gross weight of the airship.
- C) static condition of the airship and the condition of trim.

198. PLT221 COM

Which take-off procedure is considered to be most hazardous?

- A) Failing to apply full engine power properly on all takeoffs, regardless of wind.
- B) Maintaining only 50 percent of the maximum permissible positive angle of inclination.
- C) Maintaining a negative angle of inclination during takeoff after elevator response is adequate for controllability.

199. PLT295 COM

What is the primary consideration in determining the length and frequency of flight instruction periods?

- A) Fatigue.
- B) Mental acuity.
- C) Physical conditioning.

200. PLT083 COM

(Refer to figure 28) If the glide slope becomes inoperative during the ILS RWY 31R procedure at DSM, what MDA applies?

- A) 1,157 feet.
- B) 1,320 feet.
- C) 1,360 feet.

201. PLT170 COM

While being radar vectored, an approach clearance is received. The last assigned altitude should be maintained until

- A) reaching the FAF.
- B) advised to begin descent.
- C) established on a segment of a published route or instrument approach procedure.

202. PLT083 COM

(Refer to figure 27.) The symbol [9200] in the MSA circle of the ILS RWY 35R procedure at DEN represents a minimum safe sector altitude within 25 NM of

- A) Denver VORTAC.
- B) Dymon outer marker.
- C) Cruup I-AQD DME fix.

203. PLT277 COM

(Refer to figures 26) The final approach fix for the ILS precision approach is located at

- A) DENAY intersection.
- B) glide slope intercept.
- C) ROMEN intersection/locator outer marker.

204. PLT277 COM

(Refer to figure 27.) In the DEN ILS RWY 35R procedure, the glide slope intercept altitude is

- A) 11,000 feet MSL.
- B) 7,000 feet MSL.
- C) 9,000 feet MSL.

205. PLT083 COM

(Refer to figure 28.) During the ILS RWY 31R procedure at DSM, the minimum altitude for glide slope interception is

- A) 2,365 feet MSL.
- B) 2,400 feet MSL.
- C) 3,000 feet MSL.

206. PLT080 COM

Which is true regarding STAR's? STAR's are

- A) used to separate IFR and known VFR traffic.
- B) to facilitate transition between en route and instrument approach procedures.
- C) used at certain airports to relieve traffic congestion.

207. PLT391 COM

You are flying an airship under an IFR flight plan and experience two-way communications radio failure while in VFR conditions. In this situation, you should continue your flight under

- A) VFR and land as soon as practicable.
- B) VFR and proceed to your flight-plan destination.
- C) IFR and maintain the last assigned route and altitude to your flight-plan destination.

208. PLT044 COM

Does the ATC term, 'cruise 3000', apply to airship IFR operations?

- A) No, this term applies to airplane IFR operations only.
- B) Yes, it means that any assigned altitude can be vacated without notifying ATC.
- C) Yes, in part, it authorizes the pilot to commence the approach at the destination airport at the pilot's discretion.

209. PLT040 COM

(Refer to figure 55) En route on V112 from BTG VORTAC to LTJ VORTAC, the minimum altitude crossing GYMME intersection is

- A) 6,400 feet.
- B) 6,500 feet.
- C) 7,000 feet.

210. PLT298 COM

When operating an airship under IFR with a VFR-on-top clearance, what altitude should be maintained?

- A) The last IFR altitude assigned by ATC.
- B) An IFR cruising altitude appropriate to the magnetic course being flown.
- C) A VFR cruising altitude appropriate to the magnetic course being flown and as restricted by ATC.

211. PLT220 COM

Operation of a lighter-than-air airship, during the period of sunset to sunrise, requires it be equipped and lighted with

- A) position lights.
- B) position lights and aviation red or white anticollision light system.

C) approved aviation red and white lights.

212. PLT470 COM

During the transition from pre-rotation to flight, all rotor blades change pitch

- A) simultaneously to the same angle of incidence.
- B) simultaneously but to different angles of incidence.
- C) to the same degree at the same point in the cycle of rotation.

213. PLT123 COM

Why should gyroplane operations within the cross-hatched portion of a Height vs. Velocity chart be avoided?

- A) The rotor RPM may build excessively high if it is necessary to flare at such low altitudes.
- B) Sufficient airspeed may not be available to ensure a safe landing in case of an engine failure.
- C) Turbulence near the surface can dephase the blade dampers causing geometric unbalanced conditions on the rotor system.

214. PLT011 COM

(Refer to figures 45 and 46.)

GIVEN:

Pressure altitude	4,000 ft
Ambient temperature	80 °F

To clear a 50-foot obstacle, a jump takeoff would require

- A) more distance than a running takeoff.
- B) less distance than a running takeoff.
- C) the same distance as a running takeoff.

215. PLT011 COM

(Refer to figures 45 and 46.)

GIVEN:

Pressure altitude	4,000 ft
Ambient temperature	80 °F

The takeoff distance to clear a 50-foot obstacle is

- A) 1,225 feet for a jump takeoff.
- B) 1,440 feet for a running takeoff.
- C) less for a running takeoff than for a jump takeoff.

216. PLT373 COM

The principal factor limiting the never-exceed speed (VNE) of a gyroplane is

- A) turbulence and altitude.
- B) blade-tip speed, which must remain below the speed of sound.
- C) lack of sufficient cyclic stick control to compensate for dissymmetry of lift or retreating blade stall, depending on which occurs first.

217. PLT040 COM

(Refer to figure 52, point 5) The floor of the Class E airspace over University Airport (005) is

- A) the surface.
- B) 700 feet AGL.
- C) 1,200 feet AGL.

218. PLT298 COM

During an aerotow, the glider moves to one side of the towplane`s flightpath. This was most likely caused by

- A) variations in the heading of the towplane.
- B) entering wingtip vortices created by the towplane.
- C) flying the sailplane in a wing-low attitude or holding unnecessary rudder pressure.

219. PLT012 COM

GIVEN:

Glider`s max auto/winch tow speed	66 MPH
Surface wind (direct headwind)	5 MPH
Wind gradient	4 MPH

When the glider reaches an altitude of 200 feet the auto/winch speed should be

- A) 42 MPH.
- B) 46 MPH.
- C) 56 MPH.

220. PLT149 COM

Select the true statement concerning gyroplane taxi procedures.

- A) Avoid abrupt control movements when blades are turning.
- B) The cyclic stick should be held in the neutral position at all times.
- C) The cyclic stick should be held slightly aft of neutral at all times.

221. PLT328 COM

With respect to using the weight information given in a typical aircraft owner's manual for computing gross weight, it is important to know that if items have been installed in the aircraft in addition to the original equipment, the

- A) allowable useful load is decreased.

- B) allowable useful load remains unchanged.
- C) maximum allowable gross weight is increased.

222. PLT235 COM

Cyclic control pressure is applied during flight that results in a maximum increase in main rotor blade pitch angle at the 'three o'clock' position. Which way will the rotor disc tilt?

- A) Aft.
- B) Left.
- C) Right.

223. PLT235 COM

What happens to the helicopter as it experiences translating tendency?

- A) It tends to dip slightly to the right as the helicopter approaches approximately 15 knots in takeoff.
- B) It gains increased rotor efficiency as air over the rotor system reaches approximately 15 knots.
- C) It moves in the direction of tail rotor thrust.

224. PLT127 COM

Rotorcraft climb performance is most adversely affected by

- A) higher than standard temperature and low relative humidity.
- B) lower than standard temperature and high relative humidity.
- C) higher than standard temperature and high relative humidity.

225. PLT127 COM

How does high density altitude affect rotorcraft performance?

- A) Engine and rotor efficiency is reduced.
- B) Engine and rotor efficiency is increased.
- C) It increases rotor drag, which requires more power for normal flight.

226. PLT190 COM

When operating a helicopter in conditions favorable for carburetor icing, the carburetor heat should be

- A) adjusted to keep the carburetor air temperature gauge indicating in the green arc at all times.
- B) OFF for takeoffs, adjusted to keep the carburetor air temperature gauge indicating in the green arc at all other times.
- C) OFF during takeoffs, approaches, and landings; adjusted to keep the carburetor air temperature gauge indicating in the green arc at all other times.

227. PLT470 COM

The primary purpose of the tail rotor system is to

- A) assist in making coordinated turns.
- B) maintain heading during forward flight.
- C) counteract the torque effect of the main rotor.

228. PLT470 COM

Can the tail rotor produce thrust to the left?

- A) No; the right thrust can only be reduced, causing tail movement to the left.
- B) Yes; primarily so that hovering turns can be accomplished to the right.
- C) Yes; primarily to counteract the drag of the transmission during autorotation.

229. PLT112 COM

If the RPM is low and the manifold pressure is high, what initial corrective action should be taken?

- A) Increase the throttle.
- B) Lower the collective pitch.
- C) Raise the collective pitch.

230. PLT472 COM

A medium-frequency vibration that suddenly occurs during flight could be indicative of a defective

- A) main rotor system.
- B) tail rotor system.
- C) transmission system.

231. PLT472 COM

In most helicopters, medium-frequency vibrations indicate a defective

- A) engine.
- B) main rotor system.
- C) tail rotor system.

232. PLT343 COM

A reciprocating engine in a helicopter is more likely to stop due to in-flight carburetor icing than will the same type engine in an airplane. This statement

- A) has no basis in fact. The same type engine will run equally well in either aircraft.
- B) is true. The freewheeling unit will not allow windmilling (flywheel) effect to be exerted on a helicopter engine.
- C) is false. The clutch will immediately release the load from the helicopter engine under engine malfunctioning conditions.

233. PLT470 COM

The main rotor blades of a fully-articulated rotor system can

- A) flap and feather collectively.
- B) flap, drag, and feather independently.
- C) feather independently, but cannot flap or drag.

234. PLT470 COM

The main rotor blades of a semirigid rotor system can

- A) flap together as a unit.
- B) flap, drag, and feather independently.
- C) feather independently, but cannot flap or drag.

235. PLT472 COM

Abnormal helicopter vibrations in the low-frequency range are associated with which system or component?

- A) Tail rotor.
- B) Main rotor.
- C) Transmission.

236. PLT471 COM

What is the primary purpose of the clutch?

- A) It allows the engine to be started without driving the main rotor system.
- B) It provides disengagement of the engine from the rotor system for autorotation.
- C) It transmits engine power to the main rotor, tail rotor, generator/alternator, and other accessories.

237. PLT471 COM

What is the primary purpose of the freewheeling unit?

- A) It allows the engine to be started without driving the main rotor system.
- B) It provides speed reduction between the engine, main rotor system, and tail rotor system.
- C) It provides disengagement of the engine from the rotor system for autorotation purposes.

238. PLT435 COM

When approaching to land at an airport, without an operating control tower, in Class G airspace, a helicopter pilot should

- A) enter and fly a traffic pattern at 800 feet AGL.
- B) make all turns to the left, unless otherwise indicated.
- C) avoid the flow of fixed-wing aircraft.

239. PLT336 COM

During a normal approach to a hover, the collective pitch control is used primarily to

- A) maintain RPM.
- B) control the rate of closure.
- C) control the angle of descent.

240. PLT112 COM

During climbing flight, the manifold pressure is low and the RPM is high. What initial corrective action should be taken?

- A) Increase the throttle.
- B) Decrease the throttle.
- C) Raise the collective pitch.

241. PLT175 COM

Using left pedal to assist a left turn during an autorotative descent will probably cause the rotor RPM to

- A) increase and the airspeed to decrease.
- B) decrease and the aircraft nose to pitch down.
- C) increase and the aircraft nose to pitch down.

242. PLT259 COM

Ground resonance is less likely to occur with helicopters that are not equipped with

- A) rigid rotor systems.
- B) fully articulated rotor systems.
- C) semi-rigid rotor systems.

243. PLT265 COM

Should a helicopter pilot ever be concerned about ground resonance during takeoff?

- A) No; ground resonance occurs only during an autorotative touchdown.
- B) Yes; although it is more likely to occur on landing, it can occur during takeoff.
- C) Yes, but only during slope takeoffs.

244. PLT169 COM

The antitorque system fails during cruising flight and a powered approach landing is commenced. If the helicopter yaws to the right just prior to touchdown, what could the pilot do to help swing the nose to the left?

- A) Increase the throttle.
- B) Decrease the throttle.
- C) Increase collective pitch.

245. PLT470 COM

How should a pilot react at the onset of retreating blade stall?

- A) Reduce collective pitch, rotor RPM, and forward airspeed.
- B) Reduce collective pitch, increase rotor RPM, and reduce forward airspeed.
- C) Increase collective pitch, reduce rotor RPM, and reduce forward airspeed.

246. PLT208 COM

Which statement is true about an autorotative descent?

- A) Generally, only the cyclic control is used to make turns.
- B) The pilot should use the collective pitch control to control the rate of descent.
- C) The rotor RPM will tend to decrease if a tight turn is made with a heavily loaded helicopter.

247. PLT349 COM

When conducting a confined area-type operation, the primary purpose of the high reconnaissance is to determine the

- A) power requirements for the approach.
- B) suitability of the area for landing.
- C) amount of slope in the landing area.

248. PLT170 COM

During a pinnacle approach under conditions of high wind and turbulence, the pilot should make a

- A) shallow approach, maintaining a constant line of descent with cyclic applications.
- B) normal approach, maintaining a slower-than-normal rate of descent with cyclic applications.
- C) steeper-than-normal approach, maintaining the desired angle of descent with collective applications.

249. PLT129 COM

What is the procedure for a slope landing?

- A) Use maximum RPM and maximum manifold pressure.
- B) If the slope is 10° or less, the landing should be made perpendicular to the slope.
- C) When parallel to the slope, slowly lower the upslope skid to the ground prior to lowering the downslope skid.

250. PLT113 COM

When planning slope operations, only slopes of 5° gradient or less should be considered, primarily because

- A) ground effect is lost on slopes of steeper gradient.
- B) downwash turbulence is more severe on slopes of steeper gradient.
- C) most helicopters are not designed for operations on slopes of steeper gradient.

251. PLT268 COM

A pilot is hovering during calm wind conditions. The greatest amount of engine power will be required when

- A) ground effect exists.
- B) making a left-pedal turn.
- C) making a right-pedal turn.

252. PLT201 COM

Which is true concerning a running takeoff?

- A) If a helicopter cannot be lifted vertically, a running takeoff should be made.
- B) One advantage of a running takeoff is that the additional airspeed can be converted quickly to altitude.
- C) A running takeoff may be possible when gross weight or density altitude prevents a sustained hover at normal hovering altitude.

253. PLT021 COM

GIVEN:

WEIGHT		LNG.	LNG.	LAT.	LAT.
		ARM	MOM.	ARM.	MOM.
Empty weight	1700	116.1	?	+0.2	
Fuel (75 gal at 6.8 ppg)	?	110.0	--	--	
Oil	12	179.0	--	--	
Pilot (right seat)	175	65.0	?	12.5	
Passenger (left seat)	195	104.0	?	-13.3	?
TOTALS	?	?	?	?	?

Determine the longitudinal and lateral CG respectively.

- A) 109.35 inches and -.04 inches.
- B) 110.43 inches and +.02 inches.
- C) 110.83 inches and -.02 inches.

254. PLT240 COM

A helicopter is loaded in such a manner that the CG is located aft of the aft allowable CG limit. Which is true about this situation?

- A) In case of an autorotation, sufficient aft cyclic control may not be available to flare properly.
- B) This condition would become more hazardous as fuel is consumed, if the main fuel tank is located aft of the rotor mast.
- C) If the helicopter should pitchup due to gusty winds during high-speed flight, there may not be sufficient forward cyclic control available to lower the nose.

255. PLT240 COM

A helicopter is loaded in such a manner that the CG is located forward of the allowable CG limit. Which is true about this situation?

- A) This condition would become less hazardous as fuel is consumed if the fuel tank is located aft of the rotor mast.
- B) In case of engine failure and the resulting autorotation, you may not have enough cyclic control to flare properly for the landing.
- C) Should the aircraft pitchup during cruise flight due to gusty winds, there may not be enough forward cyclic control available to lower the nose.

256. PLT373 COM

Which is true with respect to operating limitations of a 'primary' category airplane?

- A) A 'primary' category airplane is limited to a specified operating radius from its home base.
- B) A pilot of a 'primary' category airplane must hold a commercial pilot certificate when carrying passengers for compensation or hire.
- C) No person may operate a 'primary' category airplane carrying passengers or property for compensation or hire.

257. PLT395 COM

14 CFR part 1 defines VY as

- A) speed for best rate of descent.
- B) speed for best angle of climb.
- C) speed for best rate of climb.