05/23/2007
Bank: (Commercial Pilot)
Airman Knowledge Test Question Bank

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1. H921 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. H921 COM

Baggage weighing 90 pounds is placed in a normal category airplane's baggage compartment which is placarded at 100 pounds. If this airplane is subjected to a positive load factor of 3.5 G's, the total load of the baggage would be

A) 315 pounds and would be excessive.

B) 315 pounds and would not be excessive.

C) 350 pounds and would not be excessive.

3. H921 COM

While holding the angle of bank constant in a level turn, if the rate of turn is varied the load factor would

A) remain constant regardless of air density and the resultant lift vector.

B) vary depending upon speed and air density provided the resultant lift vector varies proportionately.

C) vary depending upon the resultant lift vector.

4. H912 COM

During the transition from straight-and-level flight to a climb, the angle of attack is increased and lift

A) is momentarily decreased.

B) remains the same.

C) is momentarily increased.

5. H912 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.

6. H912 COM

As airspeed decreases in level flight below that speed for maximum lift/drag ratio, total drag of an airplane

A) decreases because of lower parasite drag.

B) increases because of increased induced drag.

C) increases because of increased parasite drag.

7. H942 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.

8. H940 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.

9. H921 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.

10. H946 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.

11. H948 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.

12. H983 COM

If fuel consumption is 80 pounds per hour and groundspeed is 180 knots, how much fuel is required for an airplane to travel 460 NM?

A) 205 pounds.

B) 212 pounds.

C) 460 pounds.

13. H921 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.

14. I30 COM

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

A) The radarscope 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.

15. H926 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.

16. H931 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.

17. H931 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.

18. L52 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.

19. L52 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.

20. H928 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.

21. H928 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.

22. H928 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.

23. H928 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.

24. J13 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.

25. J37 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.

26. J29 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.

27. J22 COM

To use VHF/DF facilities for assistance in locating your position, you must have an operative VHF

A) transmitter and receiver.

B) transmitter and receiver, and an operative ADF receiver.

C) transmitter and receiver, and an operative VOR receiver.

28. H1276 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.

29. J27 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.

30. L05 COM

When a pilot recognizes a hazardous thought, he or she then should correct it by stating the corresponding antidote. Which of the following is the antidote for MACHO?

A) Follow the rules. They are usually right.

B) Not so fast. Think first.

C) Taking chances is foolish.

31. L05 COM

What are some of the hazardous attitudes dealt with in Aeronautical Decision Making (ADM)?

A) Risk management, stress management, and risk elements.

B) Poor decision making, situational awareness, and judgment.

C) Antiauthority (don't tell me), impulsivity (do something quickly without thinking), macho (I can do it).

32. L05 COM

The basic drive for a pilot to demonstrate the 'right stuff' can have an adverse effect on safety, by

A) a total disregard for any alternative course of action.

B) generating tendencies that lead to practices that are dangerous, often illegal, and that may lead to a mishap.

C) imposing a realistic assessment of piloting skills under stressful conditions.

33. L05 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.

34. L05 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.

35. L05 COM

The Aeronautical Decision Making (ADM) process identifies the steps involved in good decision making. One of these steps includes a pilot

A) identifying personal attitudes hazardous to safe flight.

B) developing the 'right stuff' attitude.

C) making a rational evaluation of the required actions.

36. L05 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.

37. L05 COM

Which of the following is the final step of the Decide Model for effective risk management and Aeronautical Decision Making?

A) Estimate.

B) Eliminate.

C) Evaluate.

38. L05 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.

39. J31 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.

40. J31 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.

41. H843 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.

42. B10 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 distincly visible to the pilot.

43. J16 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.

44. J35 COM

(Refer to figure 55) En route on V468 from BTG VORTAC to YKM VORTAC, the minimum en route altitude at TROTS intersection is

A) 7,100 feet.

B) 10,000 feet.

C) 11,500 feet.

45. J15 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.

46. H983 COM

An airplane descends to an airport under the following conditions:

Cruising altitude	6,500 ft
Airport elevation	700 ft
Descends to	800 ft AGL
Rate of descent	500 ft/min
Average true airspeed	110 kts
True course	335°
Average wind velocity	060° at 15 kts
Variation	3°W
Deviation	+2°
Average fuel consumption	8.5 gal/hr

Determine the approximate time, compass heading, distance, and fuel consumed during the descent.

A) 10 minutes, 348°, 18 NM, 1.4 gallons.

B) 10 minutes, 355°, 17 NM, 2.4 gallons.

C) 12 minutes, 346°, 18 NM, 1.6 gallons.

47. H983 COM

You have flown 52 miles, are 6 miles off course, and have 118 miles yet to fly. To converge on your destination, the total correction angle would be

A) 3°.

B) 6°.

C) 10°.

48. H982 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.

49. H981 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.

50. J37 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.

51. J37 COM

(Refer to figure 53, point 1) This thin black shaded line is most likely

A) an arrival route.

B) a military training route.

C) a state boundary line.

52. J37 COM

(Refer to figure 53, point 2) The 16 indicates

A) an antenna top at 1,600 feet AGL.

B) the maximum elevation figure for that quadrangle.

C) the minimum safe sector altitude for that quadrangle.

53. J37 COM

(Refer to figure 54, point 6) The Class C airspace at Metropolitan Oakland International (OAK) which extends from the surface upward has a ceiling of

A) both 2,100 feet and 3,000 feet MSL.

B) 8,000 feet MSL.

C) 2,100 feet AGL.

54. J37 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.

55. H989 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°.

56. H983 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.

57. H983 COM

GIVEN:

Wingtip bearing change	5°
Time elapsed between bearing change	5 min
True airspeed	115 kts

The distance to the station is

A) 36 NM.

B) 57.5 NM.

C) 115 NM.

58. H831 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.

59. J35 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.

60. A20 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.

61. B11 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.

62. B11 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.

63. B08 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.

64. B13 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.

65. B08 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.

66. G11 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.

67. H961 COM

What is meant by the Special METAR weather observation for KBOI?

SPECI KBOI 091854Z 32005KT 1 1/2SM RA BR OVC007 17/16 A2990 RMK RAB12

A) Rain and fog obscuring two-tenths of the sky; rain began at 1912Z.

B) Rain and mist obstructing visibility; rain began at 1812Z.

C) Rain and overcast at 1200 feet AGL.

68. H961 COM

Which is true concerning the radar weather report (SD) for KOKC?

KOKC 1934 LN 8TRW++/+ 86/40 164/60 199/115 15W L2425 MT 570 AT 159/65 2 INCH HAIL RPRTD THIS CELL

A) There are three cells with tops at 11,500, 40,000, and 60,000 feet.

B) The line of cells is moving 060° with winds reported up to 40 knots.

C) The maximum tops of the cells is 57,000 feet located 65 NM southeast of the station.

69. I61 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.

70. I64 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.

71. I58 COM

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

A) weak.

B) strong.

C) unstable.

72. I58 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.

73. I59 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.

74. I28 COM

Hazardous wind shear is commonly encountered

A) near warm or stationary frontal activity.

B) when the wind velocity is stronger than 35 knots.

C) in areas of temperature inversion and near thunderstorms.

75. I28 COM

When flying low over hilly terrain, ridges, or mountain ranges, the greatest potential danger from turbulent air currents will usually be encountered on the

A) leeward side when flying with a tailwind.

B) leeward side when flying into the wind.
C) windward side when flying into the wind.

76. I27 COM
Which are characteristics of a cold air mass moving over a warm surface?
A) Cumuliform clouds, turbulence, and poor visibility.
B) Cumuliform clouds, turbulence, and good visibility.
C) Stratiform clouds, smooth air, and poor visibility.

77. I23 COM
Why does the wind have a tendency to flow parallel to the isobars above the friction level?
A) Coriolis force tends to counterbalance the horizontal pressure gradient.
B) Coriolis force acts perpendicular to a line connecting the highs and lows.
C) Friction of the air with the Earth deflects the air perpendicular to the pressure gradient.

78. H953 COM
The wind system associated with a low-pressure area in the Northern Hemisphere is
A) an anticyclone and is caused by descending cold air.
B) a cyclone and is caused by Coriolis force.
C) an anticyclone and is caused by Coriolis force.

79. H953 COM
What prevents air from flowing directly from high-pressure areas to low-pressure areas?
A) Coriolis force.
B) Surface friction.
C) Pressure gradient force.

80. I23 COM
While flying cross-country, in the Northern Hemisphere, you experience a continuous left crosswind which is associated with a major wind system. This indicates that you
A) are flying toward an area of generally unfavorable weather conditions.
B) have flown from an area of unfavorable weather conditions.
C) cannot determine weather conditions without knowing pressure changes.

81. I28 COM
Convective currents are most active on warm summer afternoons when winds are
A) light.
B) moderate.

C) strong.

82. I25 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.

83. I25 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.

84. I25 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.

85. H951 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.

86. I26 COM

Which cloud types would indicate convective turbulence?

A) Cirrus clouds.

B) Nimbostratus clouds.

C) Towering cumulus clouds.

87. I25 COM

The formation of either predominantly stratiform or predominantly cumuliform clouds is dependent upon the

A) source of lift.

B) stability of the air being lifted.

C) temperature of the air being lifted.

88. I31 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.

89. I31 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.

90. I31 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.

91. I31 COM

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

A) nocturnal cooling.

B) adiabatic cooling.

C) evaporation of precipitation.

92. I31 COM

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

A) Advection fog.

B) Radiation fog.

C) Precipitation-induced fog.

93. I24 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.

94. I27 COM

Which is true regarding a cold front occlusion? The air ahead of the warm front

A) is colder than the air behind the overtaking cold front.

B) is warmer than the air behind the overtaking cold front.

C) has the same temperature as the air behind the overtaking cold front.

95. I32 COM

During the winter months in the middle latitudes, the jet stream shifts toward the

A) north and speed decreases.

B) south and speed increases.

C) north and speed increases.

96. I32 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.

97. I32 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.

98. I32 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.

99. K02 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.

100. I29 COM

Frost covering the upper surface of an airplane wing usually will cause

A) the airplane to stall at an angle of attack that is higher than normal.

B) the airplane to stall at an angle of attack that is lower than normal.

C) drag factors so large that sufficient speed cannot be obtained for takeoff.

101. I29 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.

102. I24 COM

Moisture is added to a parcel of air by

A) sublimation and condensation.

B) evaporation and condensation.

C) evaporation and sublimation.

103. I24 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.

104. H954 COM

When conditionally unstable air with high-moisture content and very warm surface temperature is forecast, one can expect what type of weather?

A) Strong updrafts and stratonimbus clouds.

B) Restricted visibility near the surface over a large area.

C) Strong updrafts and cumulonimbus clouds.

105. I25 COM

What type weather can one expect from moist, unstable air, and very warm surface temperatures?

A) Fog and low stratus clouds.

B) Continuous heavy precipitation.

C) Strong updrafts and cumulonimbus clouds.

106. I25 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.

107. I25 COM

Which would increase the stability of an air mass?

A) Warming from below.

B) Cooling from below.

C) Decrease in water vapor.

108. I25 COM

Which would decrease the stability of an air mass?

A) Warming from below.

B) Cooling from below.

C) Decrease in water vapor.

109. I24 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.

110. I21 COM

What is the standard temperature at 10,000 feet?

A) -5 °C.

B) -15 °C.

C) +5 °C.

111. I21 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.

112. I21 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.

113. I22 COM
GIVEN:

Pressure altitude	12,000 ft
True air temperature	+50 °F

From the conditions given, the approximate density altitude is
A) 11,900 feet.
B) 14,130 feet.
C) 18,150 feet.

114. I30 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.

115. I30 COM
Hail is most likely to be associated with
A) cumulus clouds.
B) cumulonimbus clouds.
C) stratocumulus clouds.

116. I30 COM
Which statement is true concerning the hazards of hail?
A) Hail damage in horizontal flight is minimal due to the vertical movement of hail in the clouds.
B) Rain at the surface is a reliable indication of no hail aloft.
C) Hailstones may be encountered in clear air several miles from a thunderstorm.

117. I23 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.

118. H940 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.

119. H940 COM

If an airplane is loaded to the rear of its CG range, it will tend to be unstable about its

A) vertical axis.

B) lateral axis.

C) longitudinal axis.

120. O220 COM

If a balloon inadvertently descends into stratus clouds and is shielded from the Sun, and if no corrections are made, one can expect to descend

A) more slowly.

B) more rapidly.

C) at an unchanged rate.

121. H404 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.

122. H404 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.

123. O257 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.

124. J08 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.

125. O150 COM

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

A) air.

B) gas.

C) ballast.

126. H439 COM

The term `to weigh off` as used in ballooning means to determine the

A) standard weight and balance of the balloon.

B) neutral buoyancy by taking weight off at launch.

C) amount of gas required for an ascent to a preselected altitude.

127. O261 COM

One means of vertical control on a gas balloon is

A) by using the rip panel rope.

B) valving gas or releasing ballast.

C) opening and closing the appendix.

128. O30 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.

129. H227 COM

A written test has validity when it

A) yields consistent results.

B) samples liberally whatever is being measured.

C) actually measures what it is supposed to measure and nothing else.

130. H227 COM

A written test which has reliability is one which

A) yields consistent results.

B) measures small differences in the achievement of students.

C) actually measures what it is supposed to measure and nothing else.

131. H214 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.

132. H213 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.

133. H212 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.

134. H211 COM

When a student uses excuses to justify inadequate performance, it is an indication of the defense mechanism known as

A) aggression.

B) resignation.

C) rationalization.

135. H211 COM

Although defense mechanisms can serve a useful purpose, they can also be a hindrance because they

A) alleviate the cause of problems.

B) can result in delusional behavior.

C) involve self-deception and distortion of reality.

136. H233 COM

Faulty performance due to student overconfidence should be corrected by

A) high praise when no errors are made.

B) increasing the standard of performance for each lesson.

C) providing strong, negative evaluation at the end of each lesson.

137. H233 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.

138. H233 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.

139. H204 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.

140. H203 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.

141. H233 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.

142. H223 COM

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

A) 'why ...'

B) 'when ...'

C) 'where ...'

143. H220 COM

The method of arranging lesson material from the simple to complex, past to present, and known to unknown, is one that

A) the instructor should avoid.

B) creates student thought pattern departures.

C) indicates the relationship of the main points of the lesson.

144. H220 COM

When teaching from the KNOWN to the UNKNOWN, an instructor is using the student's

A) anxieties and insecurities.

B) previous experiences and knowledge.

C) previously held opinions, both valid and invalid.

145. H238 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.

146. H985 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.

147. H979 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.

148. B11 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.

149. O220 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.

150. O277 COM

What should a pilot do if a small hole is seen in the fabric during inflation?

A) Continue the inflation and make a mental note of the location of the hole for later repair.

B) Instruct a ground crewmember to inspect the hole, and if under 5 inches in length, continue the inflation.

C) Consult the flight manual to determine if the hole is within acceptable damage limits established for the balloon being flown.

151. O220 COM

Why should propane lines be bled after use?

A) Fire may result from spontaneous combustion.

B) The propane may expand and rupture the lines.

C) If the temperature is below freezing, the propane may freeze.

152. O170 COM

The best way to determine burner BTU availability is the

A) burner sound.

B) tank quantity.

C) fuel pressure gauge.

153. O171 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.

154. O220 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.

155. O170 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.

156. O220 COM

Why is it considered a good practice to blast the burner after changing fuel tanks?

A) To check for fuel line leaks.

B) It creates an immediate source of lift.

C) To ensure the new tank is functioning properly.

157. O270 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.

158. J37 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.

159. J37 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.

160. O220 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.

161. O220 COM

Which is the proper way to detect a fuel leak?

A) Sight.

B) Use of smell and sound.

C) Check fuel pressure gauge.

162. O170 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 reseat the seal.

163. O170 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.

164. H414 COM

The windspeed is such that it is necessary to deflate the envelope as rapidly as possible during a landing. When should the deflation port (rip panel) be opened?

A) Prior to ground contact.

B) The instant the gondola contacts the surface.

C) As the balloon skips off the surface the first time and the last of the ballast has been discharged.

165. H414 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.

166. O30 COM

If you are over a heavily-wooded area with no open fields in the vicinity and have only about 10 minutes of fuel remaining, you should

A) stay low and keep flying in hope that you will find an open field.

B) climb as high as possible to see where the nearest landing field is.

C) land in the trees while you have sufficient fuel for a controlled landing.

167. O265 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.

168. O30 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.

169. O263 COM
It may be possible to make changes in the direction of flight in a hot air balloon by
A) using the maneuvering vent.
B) operating at different flight altitudes.
C) flying a constant atmospheric pressure gradient.

170. H226 COM
Which is true about an instructor's critique of a student's performance?
A) It must be given in written form.
B) It should be subjective rather than objective.
C) It is a step in the learning process, not in the grading process.

171. H226 COM
When an instructor critiques a student, it should always be
A) done in private.
B) subjective rather than objective.
C) conducted immediately after the student's performance.

172. H219 COM
To enhance a student's acceptance of further instruction, the instructor should
A) keep the student informed of his/her progress.
B) continually prod the student to maintain motivational levels.
C) establish performance standards a little above the student's actual ability.

173. H226 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.

174. H227 COM
To be effective in oral quizzing during the conduct of 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.

175. H227 COM
A written test is said to be comprehensive when it
A) yields consistent results.
B) includes all levels of difficulty.
C) samples liberally whatever is being measured.

176. H213 COM
To communicate effectively, instructors must
A) utilize highly organized notes.
B) display an authoritarian attitude.
C) display a positive, confident attitude.

177. H227 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.

178. H212 COM
Which would most likely indicate that a student is reacting abnormally to stress?
A) Thinks and acts rapidly.
B) Extreme overcooperation.
C) Extreme sensitivity to surroundings.

179. H211 COM
Taking physical or mental flight is a defense mechanism that students use when they
A) want to escape from frustrating situations.
B) become bewildered and lost in the advanced phase of training.
C) attempt to justify actions that otherwise would be unacceptable.

180. H211 COM
When a student asks irrelevant questions or refuses to participate in class activities, it usually is an indication of the defense mechanism known as
A) aggression.

B) resignation.

C) substitution.

181. H211 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.

182. H211 COM

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

A) flight.

B) substitution.

C) rationalization.

183. H212 COM

The instructor can counteract anxiety in a student by

A) treating student fear as a normal reaction.

B) allowing the student to select tasks to be performed.

C) continually citing the unhappy consequences of faulty performance.

184. H210 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.

185. H228 COM

Which is true concerning the use of visual aids? They

A) should be used to emphasize key points in a lesson.

B) ensure getting and holding the student's attention.

C) should not be used to cover a subject in less time.

186. H228 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.

187. H235 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.

188. H233 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.

189. H233 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. Faulty performance may soon appear due to student overconfidence.

C) Yes. The student will lose confidence in the instructor if the instructor does not invent deficiencies in the student's performance.

190. H233 COM

When a student correctly understands the situation and knows the correct procedure for the task, but fails to act at the proper time, the student most probably

A) lacks self-confidence.

B) will be unable to cope with the demands of flying.

C) is handicapped by indifference or lack of interest.

191. H235 COM

An instructor can most effectively maintain a high level of student motivation by

A) making each lesson a pleasurable experience.

B) easing the standards for an apprehensive student.

C) continually challenging the student to meet the highest objectives of training.

192. H219 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.

193. H235 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.

194. H235 COM

Which is true regarding professionalism as an instructor?

A) Anything less than sincere performance destroys the effectiveness of the professional instructor.

B) To achieve professionalism, actions and decisions must be limited to standard patterns and practices.

C) A single definition of professionalism would encompass all of the qualifications and considerations which must be present before true professionalism can exist.

195. H221 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.

196. H221 COM

What is one advantage of a lecture?

A) It provides for student participation.

B) Many ideas can be presented in a short time.

C) Maximum attainment in all types of learning outcomes is possible.

197. H220 COM

In developing a lesson, the instructor must logically organize explanations and demonstrations to help the student

A) understand the separate items of knowledge.

B) understand the relationships of the main points of the lesson.

C) learn by rote so that performance of the procedure will become automatic.

198. H216 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.

199. H238 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. L05 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.

201. J37 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.

202. H979 COM

(Refer to figure 54, point 3)

GIVEN:

Departure point	Meadowlark Airport	
Departure time	0710	
Wind	180°	8 kts

At 0917 the balloon should be

A) east of VINCO intersection.

B) over the town of Brentwood.

C) 3 miles south of the town of Brentwood.

203. H983 COM

(Refer to figure 52, point 4) If you depart Lincoln Regional Airport (LHM) and track a true course of 075° with a groundspeed of 12 knots, your position after 1 hour 20 minutes of flight would be over the town of

A) Foresthill.

B) Clipper Gap.

C) Weimar.

204. J37 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.

205. J37 COM

(Refer to figure 52, point 5) A balloon is launched at University Airport (0O5) 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.

206. J37 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.

207. A24 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.

208. J25 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.

209. I26 COM

The conditions necessary for the formation of stratiform clouds are a lifting action and

A) unstable, dry air.

B) stable, moist air.

C) unstable, moist air.

210. H427 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.

211. H1022 COM

If the glider`s radius of turn is 175 feet at 40 MPH, what would the radius of turn be if the TAS is increased to 80 MPH while maintaining a constant angle of bank?

A) 350 feet.

B) 525 feet.

C) 700 feet.

212. H1067 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.

213. H1030 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.

214. H1035 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.

215. H1030 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.

216. H1024 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.

217. H1066 COM

Which is true regarding minimum control airspeed while thermalling? Minimum control airspeed

A) may coincide with minimum sink airspeed.

B) is greater than minimum sink airspeed.

C) never coincides with minimum sink airspeed.

218. H1033 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.

219. H1086 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.

220. H1013 COM

The purpose of wing spoilers is to decrease

A) the drag.

B) landing speed.

C) the lift of the wing.

221. H1026 COM

When flying on a heading of east from one thermal to the next, the airspeed is increased to the speed-to-fly with 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 090°.

222. H933 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°.

223. H1025 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.

224. H1025 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.

225. H1038 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.

226. H1111 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.

227. H1072 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.

228. H1044 COM

The primary cause of towline slack during aerotows is

A) poor coordination.

B) acceleration.

C) positioning the glider too high.

229. H1043 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.

230. H1041 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.

231. H1053 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.

232. B12 COM

GIVEN:

Glider's maximum certificated operating weight	1,140 lb
Towline breaking strength	3,050 lb

Which meets the requirement for one of the safety links? A breaking strength of

A) 812 pounds installed where the towline is attached to the towplane.

B) 912 pounds installed where the towline is attached to the glider.

C) 2,300 pounds installed where the towline is attached to the glider.

233. H1049 COM

At what point during an autotow should the glider pilot establish the maximum pitch attitude for the climb?

A) Immediately after takeoff.

B) 100 feet above the ground.

C) 200 feet above the ground.

234. H1050 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.

235. H1051 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.

236. B12 COM

During aerotow of a glider that weighs 940 pounds, which towrope tensile strength would require the use of safety links at each end of the rope?

A) 752 pounds.

B) 1,500 pounds.

C) 2,000 pounds.

237. H1030 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.

238. H1096 COM

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

A) -10.

B) -5.

C) +20.

239. I35 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.

240. I35 COM

(Refer to figure 6.) At the 0900 hours sounding and the line plotted from the surface to 10,000 feet, what temperature must exist at the surface for instability to take place between these altitudes? Any temperature

A) less than 68 °F.

B) more than 68 °F.

C) less than 43 °F.

241. H1097 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.

242. H1096 COM

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

A) +5.

B) -5.

C) -10.

243. I35 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.

244. P12 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.

245. P01 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.

246. P05 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.

247. P05 COM

The ballonet volume of an airship envelope with respect to the total gas volume is approximately

A) 15 percent.

B) 25 percent.

C) 30 percent.

248. P05 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.

249. P11 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.

250. P04 COM

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

A) Slightly nosedown.

B) Slightly tail down.

C) Flying in equilibrium.

251. P11 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.

252. P03 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.

253. P11 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°.

254. P11 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.

255. P11 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.

256. J42 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.

257. J18 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.

258. J42 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.

259. J42 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.

260. J42 COM

(Refer to figure 29) When approaching the ATL ILS RWY 8L, how far from the FAF is the missed approach point?

A) 4.8 NM.

B) 5.2 NM.

C) 12.0 NM.

261. J42 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.

262. J18 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.

263. B08 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.

264. J33 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.

265. J35 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.

266. J14 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.

267. B11 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.

268. H765 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.

269. H720 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.

270. H720 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.

271. H762 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.

272. J37 COM

(Refer to figure 52, point 5) The floor of the Class E airspace over University Airport (0O5) is

A) the surface.

B) 700 feet AGL.

C) 1,200 feet AGL.

273. H767 COM

If ground resonance is experienced during rotor spin-up, what action should you take?

A) Taxi to a smooth area.

B) Make a normal takeoff immediately.

C) Close the throttle and slowly raise the spin-up lever.

274. H766 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.

275. H766 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.

276. H116 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.

277. H705 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.

278. H703 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.

279. H720 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.

280. H720 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.

281. H717 COM

As altitude increases, the VNE of a helicopter will

A) increase.

B) decrease.

C) remain the same.

282. H710 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.

283. H706 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.

284. H705 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.

285. H705 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.

286. H705 COM

During level flight, if the manifold pressure is high and the RPM is low, what initial corrective action should be made?

A) Decrease the throttle.

B) Increase the throttle.

C) Lower the collective pitch.

287. H745 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.

288. H745 COM

In most helicopters, medium-frequency vibrations indicate a defective

A) engine.

B) main rotor system.

C) tail rotor system.

289. H707 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.

290. H701 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.

291. H709 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.

292. H745 COM

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

A) Tail rotor.

B) Main rotor.

C) Transmission.

293. H708 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.

294. H708 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.

295. B08 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.

296. H732 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.

297. H705 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.

298. H745 COM

When making an autorotation to touchdown, what action is most appropriate?

A) A slightly nose-high attitude at touchdown is the proper procedure.

B) The skids should be in a longitudinally level attitude at touchdown.

C) Aft cyclic application after touchdown is desirable to help decrease ground run.

299. H746 COM

Using right pedal to assist a right turn during an autorotative descent will probably result in what actions?

A) A decrease in rotor RPM, pitch up of the nose, decrease in sink rate, and increase in indicated airspeed.

B) An increase in rotor RPM, pitch up of the nose, decrease in sink rate, and increase in indicated airspeed.

C) An increase in rotor RPM, pitch down of the nose, increase in sink rate, and decrease in indicated airspeed.

300. H746 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.

301. H749 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.

302. H745 COM

Which procedure will result in recovery from settling with power?

A) Increase collective pitch and power.

B) Maintain constant collective pitch and increase throttle.

C) Increase forward speed and reduce collective pitch.

303. H745 COM

If complete power failure should occur while cruising at altitude, the pilot should

A) partially lower the collective pitch, close the throttle, then completely lower the collective pitch.

B) lower the collective pitch as necessary to maintain proper rotor RPM, and apply right pedal to correct for yaw.

C) close the throttle, lower the collective pitch to the full-down position, apply left pedal to correct for yaw, and establish a normal power-off glide.

304. H745 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.

305. H745 COM

What are the major indications of an incipient retreating blade stall situation, in order of occurrence?

A) Low-frequency vibration, pitchup of the nose, and a roll in the direction of the retreating blade.

B) Slow pitchup of the nose, high-frequency vibration, and a tendency for the helicopter to roll.

C) Slow pitchup of the nose, tendency for the helicopter to roll, followed by a medium-frequency vibration.

306. H745 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.

307. H745 COM

To recover from a settling with power condition, the pilot should

A) not apply antitorque pedal during the recovery.

B) increase rotor RPM, reduce forward airspeed, and minimize maneuvering.

C) apply forward cyclic and simultaneously reduce collective, if altitude permits.

308. H745 COM

When operating at high forward airspeed, retreating blade stall is more likely to occur under conditions of

A) low gross weight, high density altitude, and smooth air.

B) high gross weight, low density altitude, and smooth air.

C) high gross weight, high density altitude, and turbulent air.

309. H739 COM

During the entry into a quick stop, how should the collective pitch control be used? It should be

A) lowered as necessary to prevent ballooning.

B) raised as necessary to prevent a rotor overspeed.

C) raised as necessary to prevent a loss of altitude.

310. H743 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.

311. H741 COM

Normal RPM should be maintained during a running landing primarily to ensure

A) adequate directional control until the helicopter stops.

B) that sufficient lift is available should an emergency develop.

C) longitudinal and lateral control, especially if the helicopter is heavily loaded or high density altitude conditions exist.

312. H744 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.

313. H745 COM

During the flare portion of a power-off landing, the rotor RPM tends to

A) remain constant.

B) increase initially.

C) decrease initially.

314. H742 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.

315. H742 COM

When making a slope landing, the cyclic pitch control should be used to

A) lower the downslope skid to the ground.

B) hold the upslope skid against the slope.

C) place the rotor disc parallel to the slope.

316. H742 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.

317. H726 COM

During calm wind conditions, in most helicopters, which of these flight operations would require the most power?

A) A left-pedal turn.

B) A right-pedal turn.

C) Hovering in ground effect.

318. H726 COM

You are hovering during calm wind conditions and decide to make a right-pedal turn. In most helicopters equipped with reciprocating engines, the engine RPM will tend to

A) increase.

B) decrease.

C) remain unaffected.

319. H739 COM

The proper action to initiate a quick stop is to apply

A) forward cyclic, while raising the collective and applying right antitorque pedal.

B) aft cyclic, while raising the collective and applying left antitorque pedal.

C) aft cyclic, while lowering the collective and applying right antitorque pedal.

320. H727 COM

To taxi on the surface in a safe and efficient manner, helicopter pilots should use the

A) cyclic pitch to control starting, taxi speed, and stopping.

B) collective pitch to control starting, taxi speed, and stopping.

C) antitorque pedals to correct for drift during crosswind conditions.

321. H727 COM

During surface taxiing, the cyclic pitch stick is used to control

A) heading.

B) ground track.

C) forward movement.

322. H727 COM

To taxi on the surface in a safe and efficient manner, one should use the cyclic pitch to

A) start and stop aircraft movement.

B) maintain heading during crosswind conditions.

C) correct for drift during crosswind conditions.

323. H742 COM

Takeoff from a slope is normally accomplished by

A) making a downslope running takeoff if the surface is smooth.

B) simultaneously applying collective pitch and downslope cyclic control.

C) bringing the helicopter to a level attitude before completely leaving the ground.

324. B10 COM

A pilot performing a published instrument approach is not authorized to perform a procedure turn when

A) maneuvering at radar vectoring altitudes.

B) receiving a radar vector to a final approach course or fix.

C) maneuvering at minimum safe altitudes.

325. H719 COM

GIVEN:

WEIGHT		LNG. ARM	LNG. MOM.	LAT. ARM.	LAT. 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.

326. H719 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.

327. H719 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, sufficient cyclic control may not be available to flare properly to land.

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.

328. B12 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.

329. A02 COM

14 CFR part 1 defines V_Y as

A) speed for best rate of descent.

B) speed for best angle of climb.

C) speed for best rate of climb.