Question block created by wizard

1. About which axis does rolling occur?

o (a) lateral axis.

• (b) longitudinal axis.

o (c) vertical axis.

If choice b is selected set score to 1.

2. The axes of an aircraft by definition must all pass through the:

o (a) centre of pressure (CP).

• (b) centre of gravity (CG).

o (c) aircraft datum.

If choice b is selected set score to 1.

3. When the control column is moved forward and to the right, what is the reaction of the flight control surfaces?

o (a) the elevator goes up, the right aileron moves up and the left aileron moves down.

• (b) the elevator goes down, the right aileron moves up and the left aileron moves down.

o (c) the elevator goes down, the right aileron moves down and the left aileron moves up.

If choice b is selected set score to 1.

4. When inner and outer ailerons are mounted, outer ailerons are used:

o (a) during take-off only.

• (b) at low speeds.

o (c) at high speeds.

If choice b is selected set score to 1.

5. A jet aircraft equipped with inboard and outboard ailerons is cruising at its normal cruise Mach number. Which of the following conditions is correct?

• (a) only the inboard ailerons are active.

o (b) only the outboard ailerona are active.
o (c) the inboard and outboard ailerons are active.

If choice a is selected set score to 1.

6. When ailerons are deployed, what happens to the drag?

Drag increases on....

o (a) the down going wing.

• (b) the up going wing.

o (c) both wings.

If choice b is selected set score to 1.

7. How can adverse yaw when rolling about the longitudinal axis be prevented?

• (a) differential ailerons.

o (b) equal deflection lateral control surfaces.
o (c) a smaller fin.

If choice a is selected set score to 1.

8. In a Frise aileron control system....

o (a) the down-going aileron allows air to spil from below the wing to the upper surface of the ailerons.
o (b) the down-going aileron moves through a greater angle than the up- going aileron.

• (c) the up-going aileron produces increased drag.

If choice c is selected set score to 1.

9. In normal flight, if the control wheel is moved to the left, what will the aileron on the right do?

• (a) move down.

o (b) remain in the same position.
o (c) move up.

If choice a is selected set score to 1.

10. What is the main purpose of a Frise aileron?

o (a) Increase drag on the up going wing.

• (b) Increase drag on the downgoing wing.

o (c) Help pilot overcome aerodynamic loads.

If choice b is selected set score to 1.

11. Which flight control surfaces does have a Flaperon function?

- o (a) flaps and speed brakes.
- • (b) flaps and ailerons.
- o (c) flaps and elevators.

If choice b is selected set score to 1.

12. On an aircraft fitted with elevons in normal flight. What happens to the Elevons when the control column is moved forward?

- • (a) both move down.
- o (b) remain stationary.
- o (c) both move up.

If choice a is selected set score to 1.

13. Which control surfaces provide directional and pitch control?

- o (a) tailerons.
- o (b) elevons
- • (c) ruddervators.

If choice c is selected set score to 1.

14. How does a delta wing aircraft move about the pitch and roll axis?

- o (a) ailerons.
- o (b) elevators.
- • (c) elevons.

If choice c is selected set score to 1.

15. What do ruddervators do?

- o (a) control pitch and roll.
- o (b) control yaw and roll.
- • (c) control pitch and yaw.

If choice c is selected set score to 1.

16. What control surface movements will make an aircraft fitted with ruddervators yaw to the left?

- o (a) Right ruddervator lowered, left ruddervator raised.

- (b) Left ruddervator lowered, right ruddervator raised.

o (c) Both ruddervators raised

If choice b is selected set score to 1.

17. When a Leading edge flap is fully extended, what is the slot in the wing for?

- (a) To re-energise the boundary layer.

o (b) To increase the lift.
o (c) To allow the flap to retract into it when it retracts.

If choice a is selected set score to 1.

18. What is the effect of a Fowler flap on the wing?

o (a) increases camber only.

- (b) increases camber and wing area.

o (c) increases wing area only.

If choice b is selected set score to 1.

19. A wing slat is a movable airfoil attached to the leading edge of high-performance airplane wings. What is their purpose?

o (a) act as a dive brake or speed brake.
o (b) replace flaps.

- (c) reduce stalling speed.

If choice c is selected set score to 1.

20. The purpose of a spring tab is to....

o (a) provide a constant load resistance to surface deflection at all speeds.
o (b) provide feel back in a control system.

- (c) provide a reduction in the pilot's effort to move the controls against high air loads.

If choice c is selected set score to 1.

21. When an aircraft fitted with spoilers is rolled to the left, what is the movement of the spoilers?

o (a) left upper spoiler up and left lower spoiler down.

- (b) left spoiler is deflected up.

o (c) left spoiler is deflected up and the right down.

If choice b is selected set score to 1.

22. To which flight control are wing spoilers, when used asymmetrically, associated?

- (a) ailerons.

o (b) rudder.
o (c) elevators.

If choice a is selected set score to 1.

23. With respect to flight spoilers, when do they operate?

o (a) only operate on the ground.
o (b) only operate in flight.

- (c) can operate both on the ground and in flight.

If choice c is selected set score to 1.

24. Aerodynamic speeds vary all the way from low subsonic to hypersonic. The limits of transonic speed range are

o (a) 1.2 to 5 M

- (b) 0.8 to 1.2 M

o (c) 0.3 to 0.8 M

If choice b is selected set score to 1.

25. Aerodynamic speeds vary all the way from low subsonic to hypersonic. The limits of supersonic speed range are

- (a) 1.2 to 5 M

o (b) 0.3 to 0.8 M
o (c) 0.8 to 1.2 M

If choice a is selected set score to 1.

26. Aerodynamic speeds vary all the way from low subsonic to hypersonic. The limits of high subsonic speed range are

o (a) 0.8 to 1.2 M
o (b) 1.2 to 5 M

- (c) 0.3 to 0.8 M

If choice c is selected set score to 1.

27. Critical Mach Number (Mcrit) is:

- (a) The Mach number at which sonic flow is first adchieved.

o (b) The Mach number at which compressibility effects first appear.
o (c) The Mach number at which shockwaves are formed at the leading edge of the airfoil.

If choice a is selected set score to 1.

28. Above the critical Mach number, the drag coefficient

o (a) remains the same.
o (b) decreases.

- (c) increases.

If choice c is selected set score to 1.

29. To increase critical Mach number

o (a) tailerons are fitted.

- (b) the wings are swept.

o (c) elevons are fitted.

If choice b is selected set score to 1.

30. An aircraft....

- (a) has more than one critical mach number on different parts of the aircraft.

o (b) has only one critical mach number.
o (c) has more than one critical mach number on the wing only.

If choice a is selected set score to 1.

31. The angle of attack of a blade is the

o (a) angle between the chord line and plane of rotation.

- (b) angle between the chord line and relative airflow.

o (c) angle between the aircraft logitudinal axis and relative air flow.

If choice b is selected set score to 1.

32. The tail rotor

o (a) is not subject to dissymmetry of lift.

- (b) produces a force opposing torque reaction.

o (c) produces a force in the same direction as torque reaction.

If choice b is selected set score to 1.

33. What is autorotation?

- (a) descent of the helicopter with power off.

o (b) spinning of the helicopter fuselage due to the loss of anti-torque.
o (c) loss off directional control.

If choice a is selected set score to 1.

34. How does a rotor generate lift?

o (a) down-wash below the blade.
o (b) high pressure above the blade.

- (c) low pressure above the blade.

If choice c is selected set score to 1.

35. What limits the maximum forward speed of a helicopter?

- (a) retreating blade stall and the forward speed of the advancing blade.

o (b) the shape of the fuselage.
o (c) engine power.

If choice a is selected set score to 1.

36. With an increase in its angle of attack, what happens to the drag acting on a rotor blade?

o (a) remains constant.
o (b) decreases.

- (c) increases.

If choice c is selected set score to 1.

37. What will the advancing blade do during forward flight?

- (a) flap up.

o (b) lag.
o (c) flap down.

If choice a is selected set score to 1.

38. What prevents the rotor blades from 'folding up' during rotation?

- o (a) the lift force.
- o (b) the weight.
- • (c) the centrifugal force.

If choice c is selected set score to 1.

39. What happens to the drag, when the angle of attack is increased on a main rotor blade?

- • (a) there is an increase in drag.
- o (b) there is a reduction in drag.
- o (c) there is no change in drag.

If choice a is selected set score to 1.

40. What is the ability of the rotor blade to move up and down called?

- o (a) dragging.
- • (b) flapping.
- o (c) feathering.

If choice b is selected set score to 1.

41. How do the rotors turn on a co-axial rotor system?

- o (a) They counter-rotate on separate masts.
- o (b) Both rotate in the same direction on a common shaft.
- • (c) They counter-rotate on a common shaft.

If choice c is selected set score to 1.

42. Which movement can each individual blade of a semi-rigid rotor system make independently?

- o (a) flap,change pitch and drag.
- o (b) flap only.
- • (c) flap and change pitch.

If choice c is selected set score to 1.

43. How does collective control input affect the pitch of the blades?

- o (a) increases the angle on the advancing blade and reduces it on the retreating one.
- o (b) increases the angle on the retreating blade and reduces it on the advancing one.

- (c) increases the pitch angle the same amount on all blades.

If choice c is selected set score to 1.

44. The primary purpose of the tail rotor is

- o (a) to give lateral stability.
- • (b) to counteract torque.
- o (c) to give directional control.

If choice b is selected set score to 1.

45. Which control input must be used to lift the helicopter vertically into the hover?

- o (a) cyclic pitch lever has to be raised.
- o (b) collective pitch lever has to be lowered.
- • (c) collective pitch lever has to be raised.

If choice c is selected set score to 1.

46. Where is the helicopter throttle hand grip located?

- o (a) throttle box.
- • (b) collective lever.
- o (c) cyclic stick.

If choice b is selected set score to 1.

47. What happens when raising the collective lever?

- o (a) the angle of attack is decreased on the retreating blade.
- o (b) the pitch is decreased on all blades.
- • (c) the pitch is increased on all blades.

If choice c is selected set score to 1.

48. What happens to the RPM of the rotor, when lifting the collective lever during an autorotative descent?

- o (a) remain the same.
- • (b) reduce.
- o (c) increase.

If choice b is selected set score to 1.

49. What is the result of moving the helicopter forward?

- o (a) retreating blade flapping up.
- o (b) pitch angle of all blades decreasing.
- • (c) advancing blade flapping up.

If choice c is selected set score to 1.

50. Which of the following is an example of a failsafe structure?

- o (a) Nose radome.
- • (b) Multiple Spars.
- o (c) Single stringer.

If choice b is selected set score to 1.

51. What is a damage tolerant design?

- • (a) allows for certain damage to the structure to go un-repaired between scheduled maintenance.
- o (b) is applied only to secondary structure.
- o (c) allows for damage to structure but loses its structural strength.

If choice a is selected set score to 1.

52. In a monocoque structure, which component carries the majority of the loads?

- o (a) Longerons.
- • (b) Skin.
- o (c) Stringers.

If choice b is selected set score to 1.

53. What is the benefit of using a semi-monocoque construction?

- o (a) no safety factor is required
- o (b) does not require rivetting.
- • (c) provides a stronger construction than a monocoque.

If choice c is selected set score to 1.

54. What are the main longitudinal members in a fuselage called?

- o (a) frames.
- • (b) longerons.
- o (c) spars.

If choice b is selected set score to 1.

55. How are skin panels strengthened?

- o (a) cleats.
- o (b) struts.
- • (c) stringers.

If choice c is selected set score to 1.

56. Safe-life is

- o (a) the maximum number of flying hours that should elapse before a major structural failure occurs.
- • (b) the minimum number of flying hours that should elapse before a major structural failure occurs.
- o (c) the sharing of loads between adjacent members.

If choice b is selected set score to 1.

57. What is a Fuselage body Station?

- o (a) lateral point on a wing.
- o (b) lateral point on the fuselage.
- • (c) longitudinal point on the fuselage.

If choice c is selected set score to 1.

58. What is ATA Zone 100?

- o (a) upper fuselage.
- o (b) vertical fin.
- • (c) lower fuselage.

If choice c is selected set score to 1.

59. Which system is used to determine precise points located on an aircraft?

- o (a) longitudinal, vertical and lateral lines.
- o (b) frame stations, vertical lines and lateral lines.
- • (c) frame stations, water lines and buttock lines.

If choice c is selected set score to 1.

60. Water Lines (WLs) are measured points on a

- o (a) horizontal line.
- o (b) wing line.
- • (c) vertical line.

If choice c is selected set score to 1.

61. What are water lines?

- o (a) Measurements from the centre line.
- o (b) Vertical measurement lines.
- • (c) Horizontal measurement lines.

If choice c is selected set score to 1.

62. Fuselage station numbers are measured from the front of the aircraft. In what unit are they measured?

- • (a) inches.
- o (b) feet.
- o (c) feet and inches.

If choice a is selected set score to 1.

63. What is the measurement of the fuselage location along the Z-coordinate?

- o (a) fuselage station.
- o (b) butt line.
- • (c) water line.

If choice c is selected set score to 1.

64. How should all electronic equipment bondings be installed in the aircraft structure?

- • (a) With a low impedance path to the airframe structure.
- o (b) With a low current path to the airframe structure.

- o (c) With a high impedance path to the airframe structure.

If choice a is selected set score to 1.

65. What types of nuts must be used for bonding connections?

- o (a) Nuts must not be used for bonding.
- o (b) Nylon self locking nuts.
- • (c) Self locking nuts of all metal construction.

If choice c is selected set score to 1.

66. What is used to protect the nose radome from lightning strikes?

- o (a) Bonding wire.
- o (b) The radome is composite material and does not require a special lightning protection.
- • (c) Lightning diverter strips.

If choice c is selected set score to 1.

67. What are used on todays aircraft to protect the avionics from lightning strikes?

- o (a) Surge protection devices.
- o (b) Circuit breakers with high sensitivity.
- • (c) Bonding wires.

If choice c is selected set score to 1.

68. What causes the glow which can be seen during the initial stage of a lightning strike?

- • (a) Ionization of the air.
- o (b) Burning of metal.
- o (c) Static discharging.

If choice a is selected set score to 1.

69. The relationship between the electric field and the magnetic field in a dipole or monopole antenna are....

- o (a) in phase.
- o (b) in phase on a monopole and out of phase in a dipole.
- • (c) out of phase by 90°.

If choice c is selected set score to 1.

70. With reference to antennas, parasitic elements are:

- o (a) dipole or folded dipole radiating elements.
- o (b) unfed elements which make the antenna radiation pattern omnidirectional.
- • (c) unfed elements which make the radiation pattern directional.

If choice c is selected set score to 1.

71. Skin effect is most likely to occur:

- o (a) in radar systems fed by rectangular waveguides.
- • (b) at the higher frequencies i.e. VHF and above.
- o (c) at high power levels up to VHF.

If choice b is selected set score to 1.

72. For a frequency of 121.95 MHz, what is the wavelength?

- o (a) 2.46 cm
- • (b) 2.46 m
- o (c) 2.46 km

If choice b is selected set score to 1.

73. What is the major advantage of the telegraph over earlier methods of communication?

- • (a) Range and speed.
- o (b) Security.
- o (c) Larger messages.

If choice a is selected set score to 1.

74. Radio-frequency waves cannot be seen for which of the following reasons?

- o (a) Because radio-frequency energy is low powered.
- o (b) Because radio-frequency waves are above the sensitivity range of the human eye.
- • (c) Because radio-frequency waves are below the sensitivity range of the human eye.

If choice c is selected set score to 1.

75. Radio waves travel at what speed?

- • (a) Speed of light.

- o (b) Speed of the Earth's rotation.
- o (c) Speed of sound.

If choice a is selected set score to 1.

76. A stone dropped into water creates a series of expanding circles on the surface of the water. This is an example of which of the following types of wave motion?

- • (a) Transverse.
- o (b) Longitudinal.
- o (c) Concentric.

If choice a is selected set score to 1.

77. A sound wave that moves back and forth in the direction of propagation is an example of which of the following types of wave motion?

- • (a) Transverse.
- o (b) Concentric.
- o (c) Longitudinal.

If choice a is selected set score to 1.

78. If a wave has a velocity of 4800 meter per second and a wave-length of 5 meter, what is the frequency of the wave?

- • (a) 960 Hz
- o (b) 9,6 kHz
- o (c) 0,96 MHz

If choice a is selected set score to 1.

79. Which of the following statements about a wave is the law of reflection?

- o (a) The angle of incidence is not equal to the refracted wave.
- • (b) The angle of incidence is equal to the angle of reflection.
- o (c) The angle of incidence is equal to the refracted wave.

If choice b is selected set score to 1.

80. Varying which of the following wave characteristics will cause the length of sound waves to vary?

- o (a) Phase.
- o (b) Amplitude.
- • (c) Frequency.

If choice c is selected set score to 1.

81. What will be the effect on the wavelength of radio wave if the frequency increases?

The wavelength....

- (a) will decrease.

o (b) is not influenced.
o (c) will increase.

If choice a is selected set score to 1.

82. An increase in the frequency of a radio wave will have what effect, if any, on the velocity of the radio wave?

o (a) Decrease.
o (b) Increase.

- (c) None.

If choice c is selected set score to 1.

83. The bending of a radio wave because of a change in its velocity through a medium is known as....

- (a) refraction.

o (b) diffraction.
o (c) reflection.

If choice a is selected set score to 1.

84. Electrically charged particles that affect the propagation of radio waves are found in what atmospheric layer?

o (a) Troposphere.

- (b) Ionosphere.

o (c) Stratosphere.

If choice b is selected set score to 1.

85. Ionization in the atmosphere is produced chiefly by which of the following types of radiation?

o (a) Alpha radiation.

- (b) ultraviolet radiation.

o (c) cosmic radiation.

If choice b is selected set score to 1.

86. The density of ionized layers is normally greatest during which of the following periods?

- (a) Between early morning and late afternoon.

o (b) Between afternoon and sunset.
o (c) At night.

If choice a is selected set score to 1.

87. Compared to the other ionospheric layers at higher altitudes, the ionization density of the D layer is

o (a) relatively high.
o (b) about the same.

- (c) relatively low.

If choice c is selected set score to 1.

88. What two layers in the ionosphere recombine and largely disappear at night?

o (a) D and F
o (b) F1 and F2

- (c) D and E

If choice c is selected set score to 1.

89. For hf-radio communications covering long distances, what is the most important layer of the ionosphere?

- (a) F

o (b) C
o (c) D

If choice a is selected set score to 1.

90. The distance between the transmitter and the nearest point at which refracted waves return to earth is referred to as the

- (a) skip distance.

o (b) return distance.
o (c) reception distance.

If choice a is selected set score to 1.

91. Which irregular variation in ionospheric conditions can cause a waiting period of several days before communications return to normal?

- o (a) Sporadic E
- o (b) Sudden ionospheric disturbance.
- • (c) Ionospheric storms.

If choice c is selected set score to 1.

92. At frequencies above 100 MHz, the greatest attenuation of rf energy from raindrops is caused by which of the following factors?

- • (a) scattering.
- o (b) ducting.
- o (c) absorption.

If choice a is selected set score to 1.

93. Under certain conditions, such as ducting, line-of-sight radio waves often propagate for distances far beyond their normal ranges because of which of the following factors?

- o (a) ionospheric storms.
- • (b) temperature inversions.
- o (c) low cloud masses.

If choice b is selected set score to 1.

94. A transmission line is designed to perform which of the following functions?

- o (a) Disperse energy in all directions.
- o (b) Replace the antenna in a communications system.
- • (c) Guide electrical energy from point to point.

If choice c is selected set score to 1.

95. A measurement of the voltage to current ratio (Vin/Iin) at the input end of a transmission line is called the

- o (a) input-gain rate.
- o (b) voltage-gain ratio.
- • (c) input impedance.

If choice c is selected set score to 1.

96. Uniform capacitance throughout the length of the line is an advantage of which of the following transmission lines?

- o (a) Coaxial line.
- o (b) Twisted pair.
- • (c) Shielded pair.

If choice c is selected set score to 1.

97. Energy is transmitted from a transmitter into space using which of the following devices?

- o (a) a delay time.
- o (b) a receiver.
- • (c) an antenna.

If choice c is selected set score to 1.

98. An antenna that can be mounted to radiate rf energy either vertically or horizontally is classified as which of the followingtypes?

- • (a) Hertz.
- o (b) Quarter-wave.
- o (c) Marconi.

If choice a is selected set score to 1.

99. A complete antenna system consists of which of the following components?

- o (a) An antenna, a transmission line, and a receiver.
- o (b) A feeder, a coupling device, and a transmitter.
- • (c) A feeder line, a coupling device, and an antenna.

If choice c is selected set score to 1.

100. What is the wavelength of the basic Marconi antenna?

- • (a) 1/4 wavelength.
- o (b) wavelength.
- o (c) 1/2 wavelength.

If choice a is selected set score to 1.

101. Attenuation is....

- • (a) the loss of power of a radio signal.

- o (b) the increase of power of a radio signal.
- o (c) the combination of multiple radio signals.

If choice a is selected set score to 1.

102. The VHF (very high frequency) range of the radio spectrum is the band extending from

- o (a) 300 to 3000 MHz.
- • (b) 30 MHz to 300 MHz.
- o (c) 3 to 30 GHz

If choice b is selected set score to 1.

103. The VHF (very high frequency) is the standard civil short range communication facility using the band of frequencies between

- • (a) 118 and 136 MHz.
- o (b) 1.5 to 1.6 GHz.
- o (c) 2 and 29.999 MHz.

If choice a is selected set score to 1.

104. VHF is used by ground control facilities and aircraft or by aircraft and other aircraft on one of ……. possible frequency channels with …... spacing between channels.

- o (a) 2280 - 50 kHz
- • (b) 720 - 25 kHz
- o (c) 360 - 8.33 kHz

If choice b is selected set score to 1.

105. The mode of operation of the VHF comms transceiver is

- o (a) double channel duplex.
- • (b) single channel simplex.
- o (c) single channel duplex.

If choice b is selected set score to 1.

106. Satisfactory two-way VHF communication can typically be maintained up to …... miles, this range dependent on the aircraft height.

- o (a) 20
- o (b) 2000

- (c) 200

If choice c is selected set score to 1.

107. A squelch circuit disables the receiver output, ...

- (a) when no signals are being received so preventing noise being fed to the crew headsets between ground transmissions.

o (b) when satcom is selected.
o (c) when a SELCAL is received from ground stations equipped with a coding device.

If choice a is selected set score to 1.

108. The HF (high frequency) range of the radio spectrum is the band extending from

o (a) 300 MHz to 3 GHz

- (b) 2 - 30 MHz

o (c) 30 MHz to 300 MHz.

If choice b is selected set score to 1.

109. The HF …….matches the antenna impedance to the transceiver output over the HF frequency range.

- (a) antenna coupler

o (b) FDAU (Flight data acquisition unit)
o (c) transceiver

If choice a is selected set score to 1.

110. The Selcal (Selective Calling) can be used by....

o (a) VHF system only.

- (b) VHF and HF systems.

o (c) HF system only.

If choice b is selected set score to 1.

111. Emergency locator transmitters are self-contained, self-powered radio transmitters, designed to transmit a signal on the international distress bands of ……. (civilian) and …….. (military).

- (a) 121.5 MHz - 243 MHz

o (b) 108.10 MHz - 112 MHz
o (c) 30 MHz - 300 MHz

If choice a is selected set score to 1.

112. New ELT s will transmit on ..... so that the signal can be picked up by the Search and Rescue satellite network.

- (a) 406.025 MHz

o (b) 108.10 MHz
o (c) 121.5 MHz

If choice a is selected set score to 1.

113. Operation of an ELT....
1. is automatic on impact by a "G" force switch in the transmitter.
2. can be done through a remote switch in the cockpit.
3. can be done by a switch on the unit itself.
4. can be turned off with the switch on the case.

o (a) 1, 2 and 4.
o (b) 2, 3 and 4.

- (c) 1, 2, 3 and 4.

If choice c is selected set score to 1.

114. When activated, the battery of an ELT must be capable of furnishing power for signal transmission for at least ……

o (a) 24 hours.
o (b) 28 days.

- (c) 48 hours.

If choice c is selected set score to 1.

115. When activated, the ELT transmits :
1. a standard swept tone on 121.5 MHz.
2. a standard swept tone on 243.0 MHz.
3. a 5 watt encoded digital message to the COSPAS/SARSAT satellite system.
4. a 24 bit address through the Mode S transponder.

o (a) 1, 2 and 4.
o (b) 1 and 4.

- (c) 1, 2 and 3.

If choice c is selected set score to 1.

116. The Cockpit Voice Recorder (CVR) records :

1. conversations between pilot and co-pilot.
2. conversations between cockpit crew and air traffic controllers.
3. passenger announcements.
4. ambient cockpit sounds for example deployment of the landing gear.

- (a) 1, 2, 3 and 4.

o (b) only 1 and 2.
o (c) 1, 2 and 3.

If choice a is selected set score to 1.

117. The Cockpit Voice Recorder of a large transport aircraft will always store the last....

- (a) 30 minutes.

o (b) 60 minutes.
o (c) 120 minutes.

If choice a is selected set score to 1.

118. The Cockpit Voice Recorder of an aircraft of 5700 kg or less will always store the :

o (a) last 120 minutes.
o (b) last 60 minutes.

- (c) last 30 minutes.

If choice c is selected set score to 1.

119. On an ILS approach what will cause the aircraft to fly onto the beam?

o (a) Radio deviation.

- (b) Course deviation.

o (c) Glideslope deviation.

If choice b is selected set score to 1.

120. What is the glide slope frequency range?

- (a) 329 - 335 Mhz.

o (b) 108 - 112 Ghz.
o (c) 108 - 112 Mhz.

If choice a is selected set score to 1.

121. ILS is subject to false glide paths resulting from:

- (a) multiple lobes of radiation patterns in the vertical plane.

o (b) false signals reflected by nearby obstacles.
o (c) ground returns ahead of the antennas.

If choice a is selected set score to 1.

122. The aircraft DME receiver is able to accept replies to its own transmissions and reject replies to other aircraft interrogations because:

o (a) transmission frequencies are 63 MHz different for each aircraft.

- (b) pulse pairs are discreet to a particular aircraft.

o (c) pulse pairs are amplitude modulated with the aircraft registration.

If choice b is selected set score to 1.

123. The MIDDLE MARKER of an Instrument Landing System (ILS) facility is identified audibly and visually by a series of:

o (a) dashes and an amber light flashing.
o (b) dots and a white light flashing.

- (c) alternate dots and dashes and an amber/yellow light flashing.

If choice c is selected set score to 1.

124. The amplitude modulation and the colour of an outer marker (OM) is:

- (a) 400 Hz, blue.

o (b) 400 Hz, amber.
o (c) 3000 Hz, amber.

If choice a is selected set score to 1.

125. The BFO (Beat Frequency Oscillator) selector on an ADF receiver is used to....

o (a) display the ident on display.
o (b) find the loop 'null' position.

- (c) hear the IDENT of some NDB stations radiating a continuous wave signal.

If choice c is selected set score to 1.

126. In which frequency band do VOR transmitters operate?

- (a) VHF.

- o (b) UHF.
- o (c) SHF.

If choice a is selected set score to 1.

127. What is the colour sequence when passing over an Outer, Middle and Inner Marker beacon?

- o (a) amber(yellow) - white - green
- • (b) blue - amber(yellow) - white
- o (c) blue - green - white

If choice b is selected set score to 1.

128. Transmissions from VOR facilities may be adversely affected by....

- • (a) uneven propagation over irregular ground surfaces.
- o (b) static interference.
- o (c) night effect.

If choice a is selected set score to 1.

129. In a Doppler VOR (DVOR) the reference signal is …(1)…, the bearing signal is …(2)…and the direction of rotation of the bearing signal is…(3)..

- o (a) (1) FM - (2) AM - (3) clockwise.
- • (b) (1) AM - (2) FM - (3) anti-clockwise.
- o (c) (1) AM - (2) FM - (3) clockwise.

If choice b is selected set score to 1.

130. Concerning conventional and Doppler VORs (DVOR), which of the following is correct?

- o (a) The DVOR will always have a "D" in the ident.
- • (b) It is not possible for the instrumentation display to determine which type is being used.
- o (c) The DVOR has a higher audio ident tone than the standard VOR.

If choice b is selected set score to 1.

131. A conventional VOR....

- • (a) has an FM reference signal and an AM variable signal.
- o (b) has an AM reference signal and a 150 Hz variable signal.
- o (c) has an AM reference signal and a FM variable signal.

If choice a is selected set score to 1.

132. In an ADF system, night effect is most pronounced:

- o (a) during long winter nights.
- o (b) when the aircraft is at high altitude.
- • (c) at dusk and dawn.

If choice c is selected set score to 1.

133. Bearing information in an ADF system is....

- • (a) measured and calculated by the ADF system.
- o (b) provided by the flight management system.
- o (c) received by the antenna.

If choice a is selected set score to 1.

134. Every dot on the localizer deviation scale is....

- o (a) 5 nm from center line
- o (b) 10 nm from center line
- • (c) 1 nm from center line

If choice c is selected set score to 1.

135. What are the primary navigation inputs used by RNAV system?

- o (a) INS, Nav Aids, TAS and Drift.
- o (b) Nav Aids, Mapping Radar, FMC.
- • (c) Nav Aids, INS, FMC.

If choice c is selected set score to 1.

136. Which one of the following inputs to an Area Navigation System (R-NAV) comes from an external, not on-board, system?

- o (a) Inertial Navigation System (INS) position.
- • (b) VOR/DME radial/distance.
- o (c) Magnetic heading.

If choice b is selected set score to 1.

137. What is the required accuracy of a precision area navigation system?

- (a) 1 nautical mile.

o (b) 5 nautical miles.
o (c) 10 nautical miles.

If choice a is selected set score to 1.

138. A basic RNAV system will determine tracking information from....

- (a) VOR/DME.

o (b) Twin VOR.
o (c) twin DME.

If choice a is selected set score to 1.

139. The sequence of entering information in a MCDU is....

o (a) POS INIT - IDENT - RTE
o (b) IDENT - RTE - POS INIT

- (c) IDENT - POS INIT - RTE

If choice c is selected set score to 1.

140. The IRS position can be initialized....

o (a) on the ground and in flight with VOR/DME.
o (b) at designated positions en-route and on the ground.

- (c) on the ground only.

If choice c is selected set score to 1.

141. The period of validity of the navigational database is:

o (a) 1 month.

- (b) 28 days.

o (c) 91 days.

If choice b is selected set score to 1.

142. When power is applied to the FMS, the CDU shows the....

o (a) route (RTE) page.

- (b) ident page.

o (c) climb (CLB) page for take-off.

If choice b is selected set score to 1.

143. What is an FMC?

o (a) A flight management inertial reference system.

- (b) A flight management computer.

o (c) An autopilot/flight director system.

If choice b is selected set score to 1.

144. Which of the following is the FMS normal operating condition in the cruise?

o (a) LNAV only

- (b) LNAV and VNAV.

o (c) LNAV or VNAV.

If choice b is selected set score to 1.

145. If there is no (navigation) radio updating, what effect will this have on the FMS?

- (a) this may cause the FMS to deviate from the desired track.

o (b) this will have no effect on the FMS.
o (c) this FMS will automatically update the system.

If choice a is selected set score to 1.

All the last generation aircraft use flight control systems. The FMS is the most advanced system.

It can be defined as a....

- (a) 3-axis Flight Management System.

o (b) 2-axis Flight Management System.
o (c) management system optimized in the horizontal plane.

If choice a is selected set score to 1.

146. In the FMS vertical navigation (VNAV) climb mode the throttles are used for

o (a) correction for minor speed deviations.
o (b) controlling to a maximum thrust.

- (c) maintaining a computed EPR.

If choice c is selected set score to 1.

147. To know the valid data base on the FMS

- (a) call up the relevant page on the CDU.

o (b) perform a BITE check.
o (c) call up the relevant current status.

If choice a is selected set score to 1.

148. If one FMS fails in a dual system

o (a) FMS CDU on fail side goes blank.
o (b) system operation will not be affected.

- (c) FMS display transfers data automatically from serviceable computer.

If choice c is selected set score to 1.

149. To carry out FMS database update on FMS

- (a) use database loader.

o (b) insert new EPROM.
o (c) insert new data on CDU.

If choice a is selected set score to 1.

150. The Flight Management Computer (FMC) position is:

o (a) the actual position of the aircraft at any point in time.

- (b) the computed position based on a number of sources (IRS, Radio, ILS, GPS etc).

o (c) another source of aircaft position; it is independent of other position sources (IRS, Radio, ILS etc).

If choice b is selected set score to 1.

151. How many satellites are required for GNSS?

o (a) 8
o (b) 6 (90° apart)

- (c) 4

If choice c is selected set score to 1.

152. The space segment of GPS consists of a minimum of....

- (a) 24 satellites.

o (b) 21 satellites.
o (c) 27 satellites.

If choice a is selected set score to 1.

153. GPS sends different codes, what are these codes?

o (a) P code only.
o (b) C/A (coarse/acquisition) code only.

- (c) C/A code and P (precision) code.

If choice c is selected set score to 1.

154. What is the pseudo-random code used by all civilian GPS users?

o (a) the P code.
o (b) the Y code.

- (c) the C/A code.

If choice c is selected set score to 1.

155. What is the minimum number of satellites required for a Satellite-Assisted Navigation System (GNSS/GPS)?

o (a) 3

- (b) 4

o (c) 2

If choice b is selected set score to 1.

156. Which of the following lists all the parameters that can be determined by a GPS receiver tracking signals from 4 different satellites?

o (a) Latitude and longitude.

- (b) Latitude, longitude, altitude and time.

o (c) Latitude, longitude and altitude.

If choice b is selected set score to 1.

157. Which of the following combinations of satellite navigation systems provide the most accurate position fixes in air navigation?

- (a) NAVSTAR/GPS and GLONASS.

o (b) GLONASS and COSPAS-SARSAT.
o (c) NNSS-Transit and GLONASS.

If choice a is selected set score to 1.

158. The satellites (GPS) provide: position, time data and....

o (a) distance from departure.

- (b) velocity.

o (c) flightplan.

If choice b is selected set score to 1.

159. The electrolyte in a NiCd battery is?

o (a) Acid based.
o (b) Lithium based.

- (c) Alkaline based.

If choice c is selected set score to 1.

160. What is the nominal voltage of a NiCad battery cell?

o (a) 24 volts.

- (b) 1.2 volts.

o (c) 2 volts.

If choice b is selected set score to 1.

161. Which is the most efficient way of charging a battery?

o (a) Slow
o (b) Both slow and fast are equally efficient

- (c) Fast

If choice c is selected set score to 1.

162. Which type of battery can experience cell reversal and how can it be prevented?

o (a) NiCad battery. Prevented by always fully discharging the battery.

- (b) Lead-acid battery. Prevented by fast charging battery.
- (c) NiCad battery. Prevented by never fully discharging the battery.

If choice c is selected set score to 1.

163. What happens at the end of the charge of a NiCad battery?

- (a) The battery heats up.
- (b) The cell voltage drops.
- (c) CO2 is generated,

If choice b is selected set score to 1.

164. What product does the sump jar contain in the vent line of a lead-acid battery installation?

- (a) Distilled water.
- (b) Boric acid.
- (c) Bicarbonate of soda and water.

If choice c is selected set score to 1.

165. What is the dis-advantage of series wound generators?

- (a) When the aircraft electrical load increases, the output voltage remains the same.
- (b) When the aircraft electrical load increases, the output voltage increases.
- (c) When the aircraft electrical load increases, the output current increases.

If choice b is selected set score to 1.

166. What is the purpose of a rectifier?

- (a) Convert the AC output to DC.
- (b) Control the output voltage of a parallel wound generator.
- (c) Convert the DC output into AC.

If choice a is selected set score to 1.

167. What determines the amount of induced voltage?

- (a) The diameter of the conductor.
- (b) The speed at which the conductor moves through the magnetic field.

o (c) The length of the field frame.

If choice b is selected set score to 1.

168. How do you call the component that completes the magnetic circuit between the poles in a DC generator?

- (a) The yoke.

o (b) The brushes.
o (c) The armature.

If choice a is selected set score to 1.

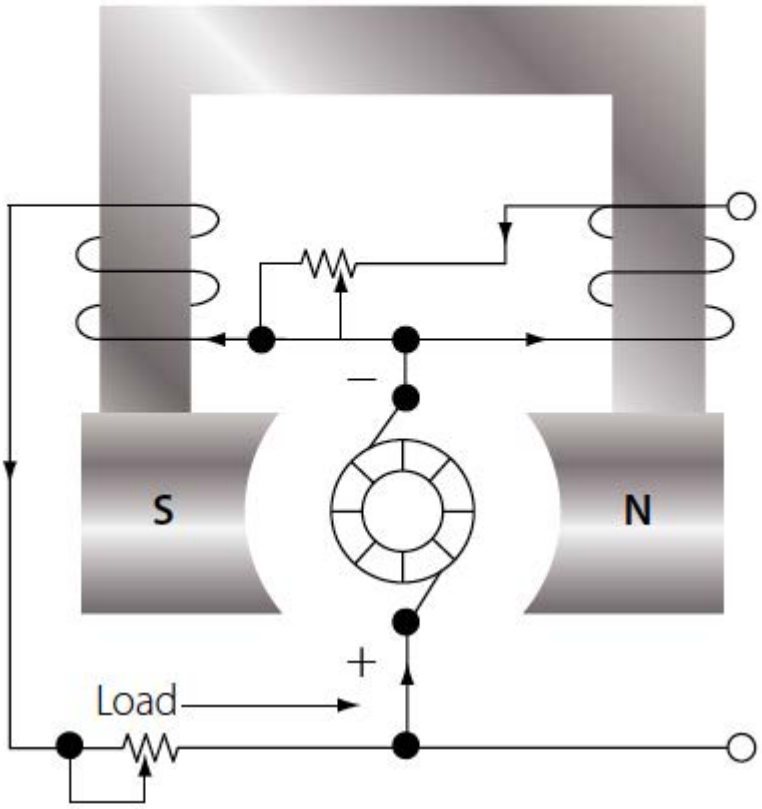
169. The output of a single coil generator is

o (a) a flat line.
o (b) a saw foot.

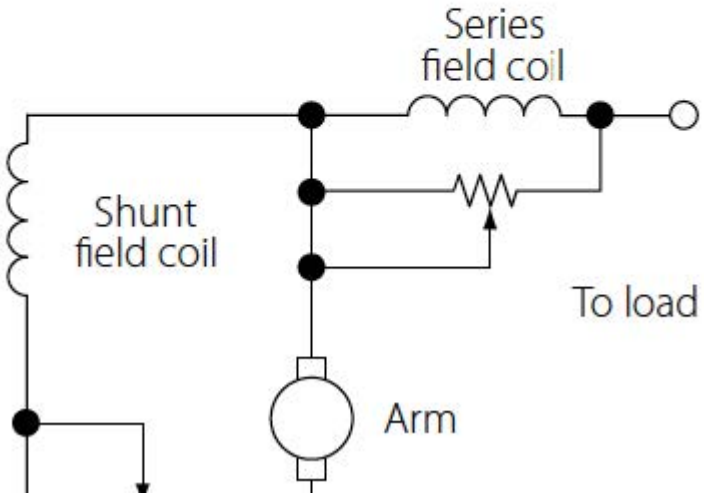
- (c) a sine-wave.

If choice c is selected set score to 1.

170. What type of voltage regulator is shown in the figure below?



(A)



- (a) Compound wound generator.

o (b) Series wound generator.
o (c) Parallel wound generator.

If choice a is selected set score to 1.

171. What type of generator / alternator is used in a variable speed constant frequency system?

- (a) DC alternator.

o (b) DC generator.
o (c) Brushless alternator.

If choice a is selected set score to 1.

172. Which of the following systems does not use a constant speed drive?

o (a) Engine driven alternator.
o (b) Integrated drive generator (IDG)

- (c) APU alternator.

If choice c is selected set score to 1.

173. What is the output speed of a constant speed drive?

- (a) 6000rpm

o (b) 12000rpm
o (c) Variable speed depending on engine speed.

If choice a is selected set score to 1.

174. If the over-speed protection circuit in a CSD (Constant Speed Drive) has activated, reset is....

- (a) only possible in the workshop.

o (b) possible from the flight deck.
o (c) possible during Line Maintenance.

If choice a is selected set score to 1.

175. The output sine waves of a 3-phase alternator will be separated by:

- (a) 120 degrees

o (b) 90 degrees
o (c) 60 degrees

If choice a is selected set score to 1.

176. In which type of unit can a permanent magnet generator (PMG) be found?

o (a) DC generator.

- (b) Brushless AC alternator.

o (c) DC alternator.

If choice b is selected set score to 1.

177. Which of the following statements about the ram air turbine is false?

o (a) The RAT can be deployed manually.
o (b) The RAT can sometimes also supply hydraulic power.

- (c) The RAT can deploy automatically on the ground.

If choice c is selected set score to 1.

178. In a constant speed motor generator, what powers the generator?

o (a) An electric motor powered by the RAT generator.

- (b) A hydraulic motor powered by a hydraulic pump driven by the RAT.

o (c) An electric motor powered by the battery.

If choice b is selected set score to 1.

179. What powers the hydraulic motor generator (HMG)?

- (a) Main hydraulic system.

o (b) RAT hydraulic pump.
o (c) Hydraulic hand pump.

If choice a is selected set score to 1.

180. When will the hydraulic motor generator (HMG) supply power?

o (a) Automatically when the main battery is discharged.
o (b) Manually, when the pilot switches it on after both main AC buses lose power.

- (c) Automatically when both main AC buses lose power.

If choice c is selected set score to 1.

181. The ram air turbine will supply....

o (a) DC power.
o (b) three phase DC power.

- (c) single phase AC power.

If choice c is selected set score to 1.

182. What is the function of the flyweight governor (installed in the RAT)?

- (a) It controls the speed of the ram air turbine.

o (b) It controls the speed of the constant speed motor generator (CSM/G).
o (c) It controls the output voltage of the hydraulic motor generator (HMG).

If choice a is selected set score to 1.

183. How is voltage regulation achieved on DC generators?

By changing the....

- (a) field current.

o (b) generator speed.
o (c) field voltage.

If choice a is selected set score to 1.

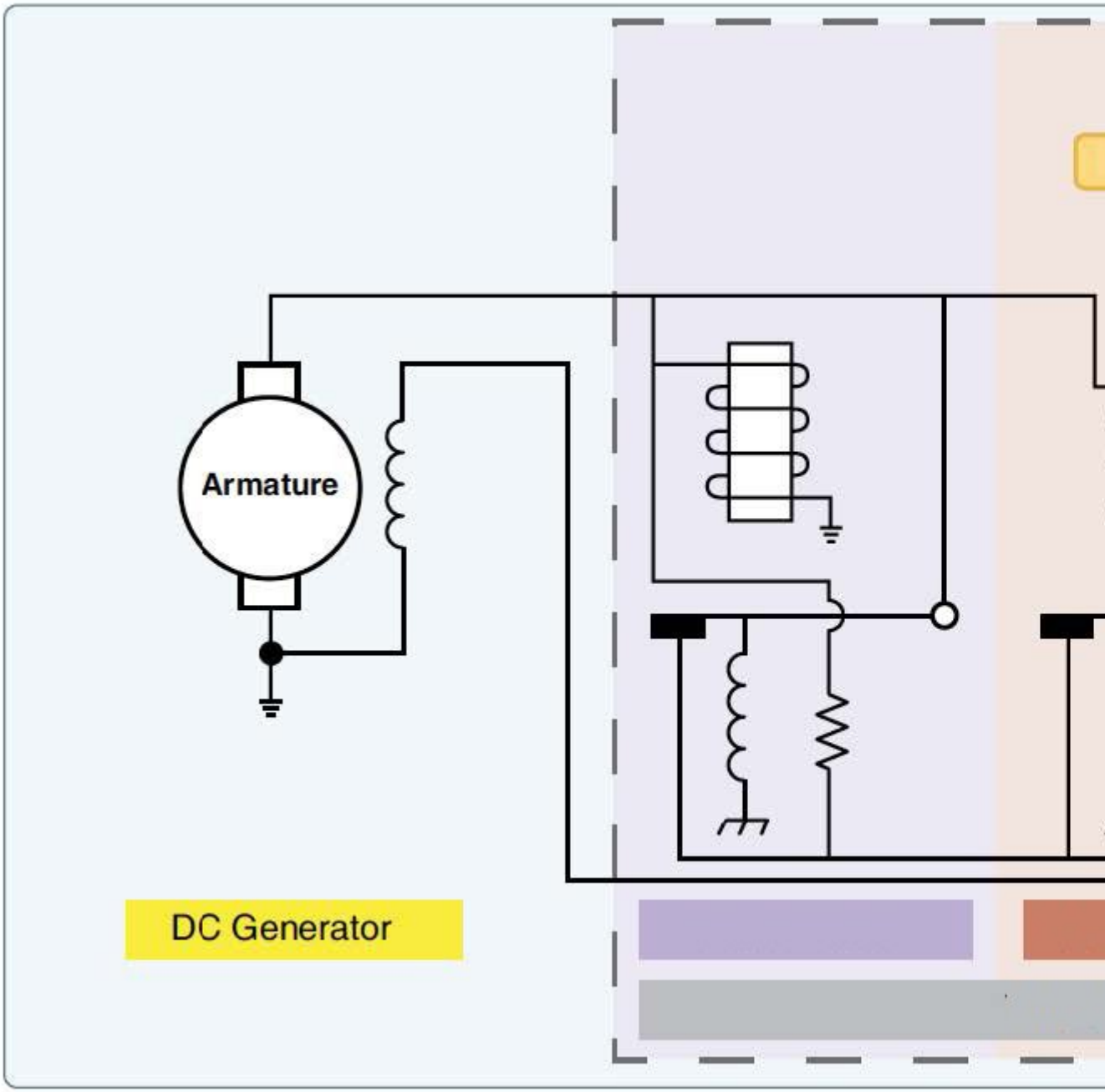
184. Which of the following is NOT part of a three-unit voltage regulator?

o (a) Current limiter.
o (b) Reverse current relay.

- (c) Open phase protection.

If choice c is selected set score to 1.

185. What type of voltage regulator is shown in the figure below?



- (a) Three-unit voltage regulator.

o (b) Carbon pile voltage regulator.
o (c) Reverse current delay.

If choice a is selected set score to 1.

186. In a parallel bus configuration the generators will:

o (a) Each supply their own AC bus.

- (b) Divide the load, with the strongest generators taking the biggest load.
- (c) Share the load equally among them.

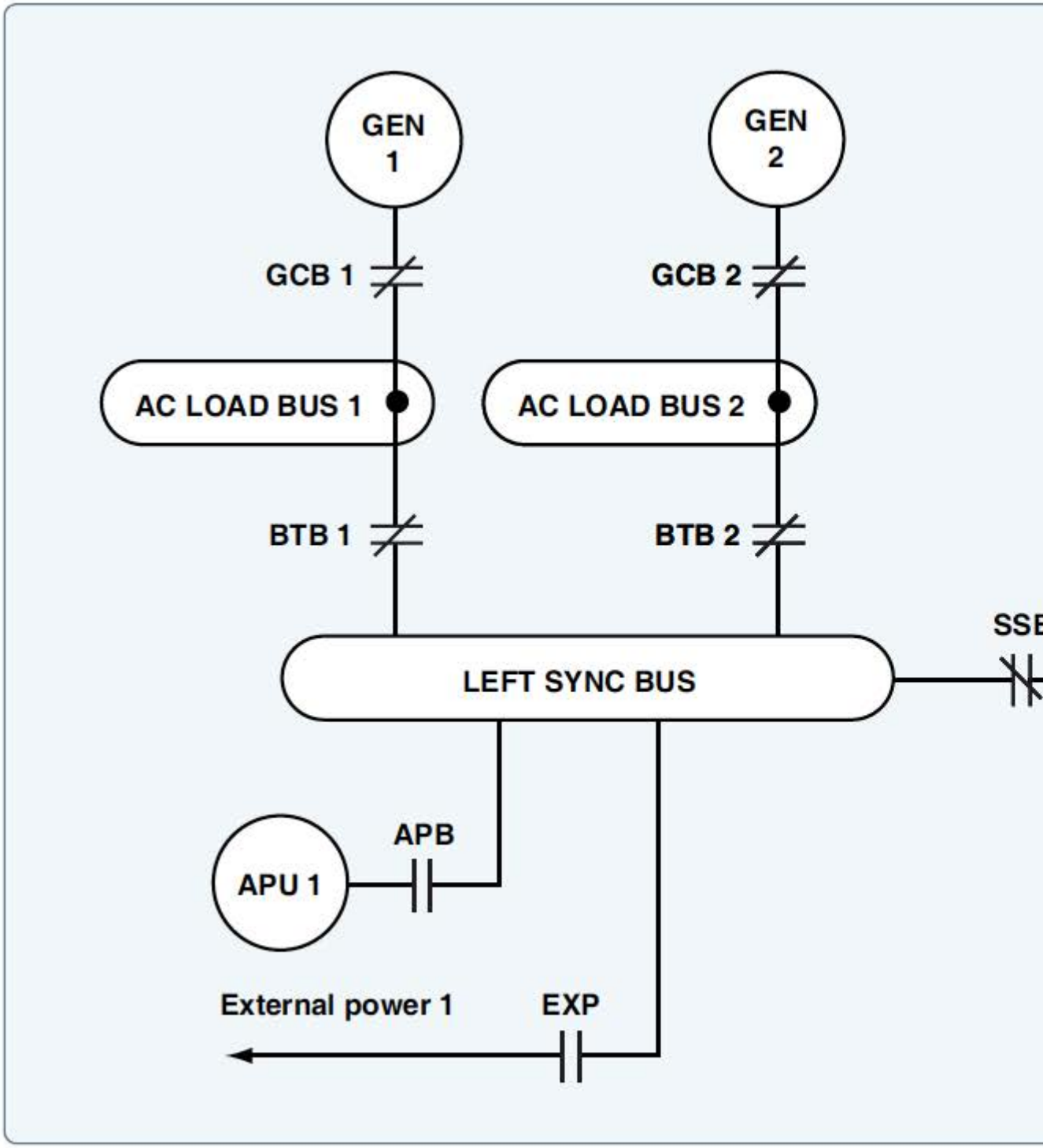
If choice c is selected set score to 1.

187. Emergency lighting is part of which service?

- (a) Ground.
- (b) Vital.
- (c) Essential.

If choice b is selected set score to 1.

188. What type of bus is show in the figure below?



- (a) Split Parallel Bus

o (b) Parrallel bus
o (c) Mergency bus

If choice a is selected set score to 1.

189. What is the primary function of a current transformer in an aircraft?

- o (a) Step-up the current in a circuit.
- o (b) Measure voltage in an electrical circuit.
- • (c) Measure current in an electrical circuit.

If choice c is selected set score to 1.

190. Which of the following statements about current transformers is true?

- • (a) The secondary winding should never be left open when in operation.
- o (b) Current transformers always have a square transformer core.
- o (c) The primary winding should never be left open when in operation.

If choice a is selected set score to 1.

191. Which formula represents the transformer ratio?

- o (a) V2 / N2 = V1 / N1
- o (b) V2 x V1 = N2 x N1
- • (c) V2 / V1 = N2 / N1

If choice c is selected set score to 1.

192. Transformer rectifiers are used for:

- o (a) Converting DC into AC.
- • (b) Converting AC into DC.
- o (c) Boosting the output voltage from 28V to 110V.

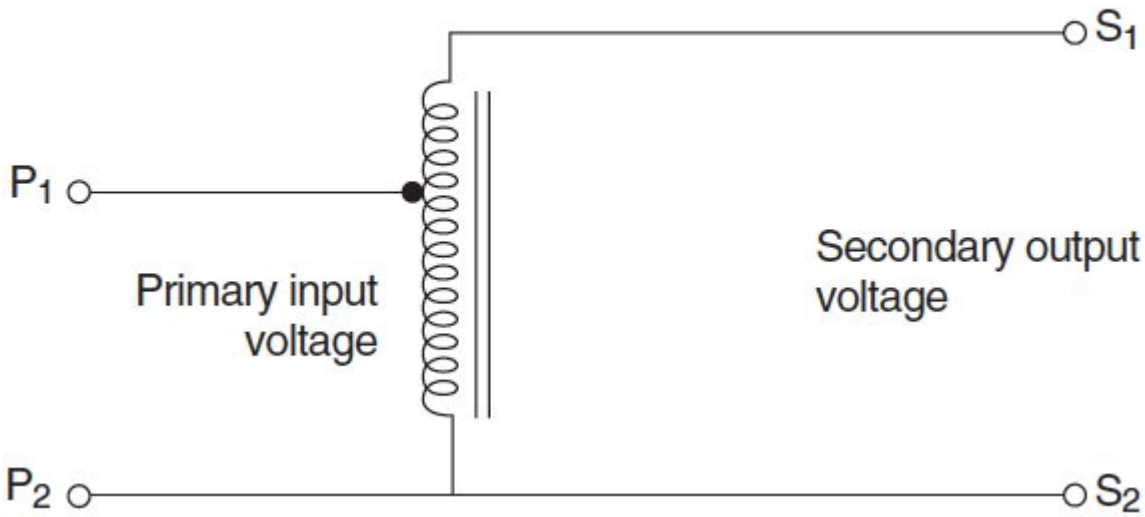
If choice b is selected set score to 1.

193. What provides overheat warning in a transformer rectifier unit?

- o (a) Thermocouple.
- • (b) Thermal switch.
- o (c) Voltage sensor.

If choice b is selected set score to 1.

194. What type of transformer is shown in the figure below?



- (a) Autotransformer

o (b) Current transformer
o (c) Transformer rectifier.

If choice a is selected set score to 1.

195. Which of the following circuit breakers CANNOT be reset while the fault exists?

o (a) Electromagnetic circuit breakers.
o (b) Automatic reset circuit breaker.

- (c) Trip free circuit breaker.

If choice c is selected set score to 1.

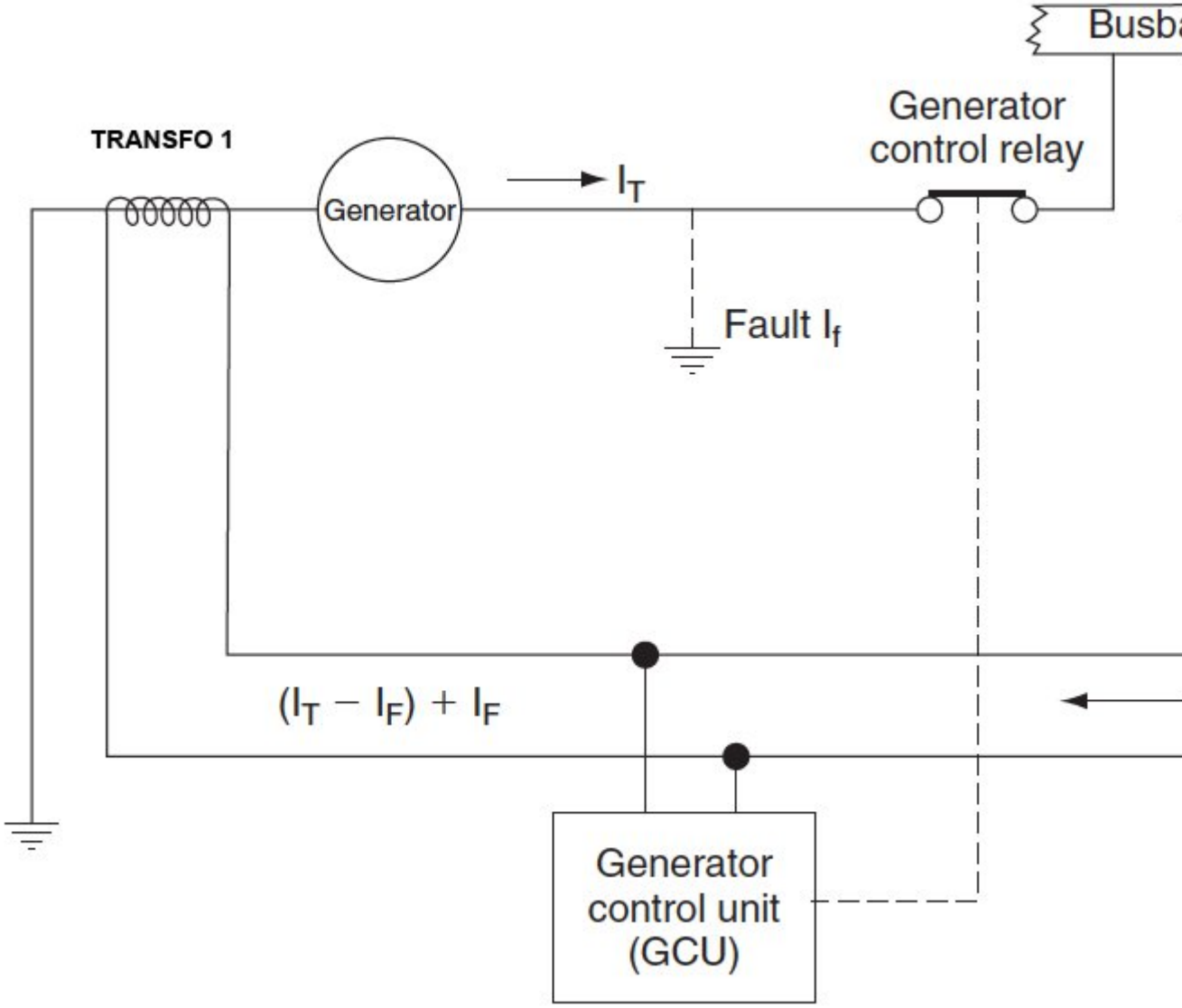
196. Where in the circuit would a fuse be installed?

o (a) Where access to replace the fuse is easiest.
o (b) As close to the unit to be protected as much as possible.

- (c) As close to the power source as possible.

If choice c is selected set score to 1.

197. In the differential protections circuit in the figure below, what type of transformers would be TRANSFO 1 and TRANSFO 2?



- o (a) TRANSFO 1 is a current transformer, TRANSFO 2 is a voltage transformer
- • (b) Both are current transformers
- o (c) Both are voltage transformers

If choice b is selected set score to 1.

198. On a large commercial aircraft, which bus will be powered as soon as external power is connected?

- o (a) Battery bus.
- o (b) The external power bus.

- (c) The ground handling bus.

If choice c is selected set score to 1.

199. What is 'no breaks power transfer'?

- o (a) Power supply remains with the same source even though power transfer to another source has been selected.

- (b) Power supply is transferred from one source to another without interrupting the supply.

- o (c) Power supply is transferred from one source to another while bypassing the circuit breakers.

If choice b is selected set score to 1.

200. When connecting external power, what prevents the application of reverse polarity to a DC powered aircraft?

- (a) A reverse polarity diode.

- o (b) An irreversible external power connector (fool proof).
- o (c) A reverse current switch.

If choice a is selected set score to 1.

201. Which lights can be used to detect ice build-up?

- o (a) Runway turn-off lights.
- o (b) Position lights.

- (c) Wing scan lights.

If choice c is selected set score to 1.

202. Where will you find taxi lights?

- o (a) In the wing root.
- o (b) In the wing leading edges.

- (c) On the nose landing gear.

If choice c is selected set score to 1.

203. Lights fitted with a dual filament are used as:

- (a) Landing light and taxi light.

- o (b) Landing light and runway turn-off light.
- o (c) Runway turn-off light and engine scan light.

If choice a is selected set score to 1.

204. What kind of light is used as cabin flood lighting?

- (a) Fluorescent tubes.

o (b) Incandescent lightbulbs.
o (c) Spot lights

If choice a is selected set score to 1.

205. Which lights are located in the passenger service units?

o (a) Cabin emergency lights.

- (b) Spotlights.

o (c) Flood lights.

If choice b is selected set score to 1.

206. Who controls the 'no smoking' and 'fasten seat belts ' lights?

o (a) Passenger.
o (b) Flight attendant.

- (c) Pilot.

If choice c is selected set score to 1.

207. Which statement is true?

- (a) When the internal emergency light switch is used both internal and external emergency light come on.

o (b) Operating the internal emergency light switch only turns on the internal emergency lights.
o (c) When operating the external emergency light switch both internal and external lights come on.

If choice a is selected set score to 1.

208. To ensure correct operation of the emergency lighting system, what must be done at specific maintenance intervals?

o (a) Replace all emergency light bulbs.

- (b) Replace the battery pack.

o (c) Recharge the battery packs.

If choice b is selected set score to 1.

209. The external emergency lights are used for:

- (a) Illuminating the escape slides.

o (b) Illuminating the area around the aircraft to help rescue workers.
o (c) Identifying the entry doors to help rescue workers locate them.

If choice a is selected set score to 1.

210. Which of the following statements is **incorrect**?

A turbo compressor....

o (a) can be switched on and off by the crew.

- (b) is used on turbo-prop and piston engine.

o (c) is used as a supplemental use source of bleed air.

If choice b is selected set score to 1.

211. During normal stages of flight, the engine bleed air source comes from:

- (a) The low pressure stage of the compressor.

o (b) Ram air.
o (c) The high pressure stage of the compressor.

If choice a is selected set score to 1.

212. Why does the engine bleed air supply come from the low and high stage of the compressor?

- (a) If the low pressure stage cannot supply enough air, the high stage will be used.

o (b) If the low pressure stage supply fails, the high stage takes over.
o (c) Some bleed air systems will use only the low pressure stage, others will use the high stage.

If choice a is selected set score to 1.

213. Where is the ground air conditioning cart used for?

o (a) Starting the engines.
o (b) Running the de-icing system.

- (c) Supplying the cabin with conditioned air, when only the cabin needs to be conditioned.

If choice c is selected set score to 1.

214. The RAM air supply is used....

- (a) as an emergency air source on pressurized aircraft to ventilate the cockpit and the cabin.

o (b) as an alternate source to power the air-conditioning packs.
o (c) only on unpressurized aircraft.

If choice a is selected set score to 1.

215. Which of the following bleed air sources CANNOT supply the aircraft systems in flight?

o (a) Engines.

- (b) Pneumatic ground cart.

o (c) Auxiliary power unit.

If choice b is selected set score to 1.

216. What supplies the warm air in a Bleed air air-conditioning system?

o (a) The gas turbine exhaust.
o (b) The engine exhaust heat.

- (c) The compressor of the gasturbine engine.

If choice c is selected set score to 1.

217. What is the purpose of the air conditioning system?

o (a) Increase the temperature of air and humidity.

- (b) Control the temperature, air flow and humidity.

o (c) Increase and decrease the temperature of air and pressurize the aircraft.

If choice b is selected set score to 1.

218. An air-to-air heat exchanger is provided to....

o (a) increase the air supply temperature.
o (b) provide an emergency ram air supply.

- (c) reduce the air supply temperature.

If choice c is selected set score to 1.

219. The aircraft airconditioning system keeps the....

o (a) cabin altitude (pressure) at 10.000 ft.

- o (b) humidity high in the cabin.
- • (c) cabin pressure at 8000 ft cabin altitude.

If choice c is selected set score to 1.

220. A refrigerant is used in....

- o (a) a pneumatic pump.
- • (b) a vapour cycle.
- o (c) an air cycle machine.

If choice b is selected set score to 1.

221. Where is the water separator located?

- o (a) Downstream of anti ice valve.
- • (b) Downstream of the compressor.
- o (c) Downstream of the turbine.

If choice b is selected set score to 1.

222. What is the function of the turbine in an air cycle machine?

The turbine drives the compressor to....

- • (a) increase temperature.
- o (b) decrease temperature.
- o (c) pressurise aircraft.

If choice a is selected set score to 1.

223. When the ram air passes through the primary heat exchanger, where does the ram air in a turbo-fan cold air system flows to?

- o (a) Inter cooler or secondary heat exchanger.
- o (b) Turbine.
- • (c) Via large fan to ram air outlet.

If choice c is selected set score to 1.

224. The heat exchanger in a turbo-fan system is cooled by …

- o (a) engine bleed air or blower air.

- (b) ambient ram air.

o (c) air bled from the main cabin supply duct.

If choice b is selected set score to 1.

225. When the refrigerant loses heat in a vapour cycle system....

o (a) the liquid evaporates to the environment.
o (b) the liquid converts to a vapour.

- (c) the vapour converts to a liquid.

If choice c is selected set score to 1.

226. What supplies in a turbo fan cold air system, the heat exchanger cooling air?

o (a) Air bled from cabin air supply duct.
o (b) Air bled directly from engine or through blower.

- (c) Fan drawn ambient air.

If choice c is selected set score to 1.

227. Heating for pressure cabins is obtained from....

o (a) only by adding heat electrically to the air supply.
o (b) air cycle machine.

- (c) air supply heated by adding hot bleed air.

If choice c is selected set score to 1.

228. What is the benefit of injecting water in the ram air duct?

o (a) Cool the air cycle machine.

- (b) Improve the efficiency of the heat exchanger.

o (c) Make the cabin air less dry.

If choice b is selected set score to 1.

229. What is the function of a pack control valve?

o (a) Control the airflow out of the cabin.
o (b) Control the outlet temperature of the pack.

- (c) Control the air flow into the cabin.

If choice c is selected set score to 1.

230. What needs to be done to the bypass valve to lower the pack outlet temperature?

- o (a) Remain the same.
- • (b) Closed.
- o (c) Opened.

If choice b is selected set score to 1.

231. A large aircraft air conditioning system's cabin temperature control....

- • (a) is selectable for each zone individually from the flight deck.
- o (b) all zone temperatures are controlled from one master switch.
- o (c) involves modulating the pack valve.

If choice a is selected set score to 1.

232. Temperature control of cabin air is achieved by....

- o (a) controlling the speed of the air cycle machine.
- o (b) varying the ambient airflow to the heat exchanger.
- • (c) regulating the amount of hot air added to the conditioned air.

If choice c is selected set score to 1.

233. How is in pressurized aircraft, temperature controlling mainly achieved?

- o (a) Varying cabin pressure.
- o (b) Adding heat to the pressurising air.
- • (c) Adding hot bleed air to the conditioned air.

If choice c is selected set score to 1.

234. Conditioned air is …

- • (a) temperature and pressure adjusted.
- o (b) moisture removed.
- o (c) oxygen added.

If choice a is selected set score to 1.

235. What must be the minimum humidity in the cabin?

- o (a) 60 %.

o (b) 20 %.

• (c) 30 %.

If choice c is selected set score to 1.

236. The temperature within the cabin of the aircraft is normally maintained at ….

o (a) 20 ℃ to 24 ℃.

• (b) 21 ℃ to 27 ℃.

o (c) 12 ℃ to 18 ℃.

If choice b is selected set score to 1.

237. What determines the effective temperature of a cabin?

• (a) Temperature and humidity.

o (b) Temperature only.
o (c) Temperature, humidity, thermal inertia and heat load.

If choice a is selected set score to 1.

238. A cabin humidifier is operated....

• (a) at high altitudes.

o (b) on the ground.
o (c) at low altitudes.

If choice a is selected set score to 1.

239. In an airconditioning system, the purpose of the condenser is to condence water in the air before it goes to the....

• (a) water extractor.

o (b) bypass valve.
o (c) heat exchanger.

If choice a is selected set score to 1.

240. How is the pressure inside the cabin controlled?

o (a) By controlling the amount of bleed air to the air conditioning packs.
o (b) By regulating the air conditioning pack output pressure.

• (c) By using one or more outflow valves.

If choice c is selected set score to 1.

241. Which of the following modes of pressurization places the highest load demands on the aircraft structure?

- (a) Isobaric mode.

o (b) Unpressurized.
o (c) Constant-differential pressure.

If choice a is selected set score to 1.

242. The outflow valve of a pressurized cabin system opens when the cabin pressure is....

o (a) too low.

- (b) too high.

o (c) too low or too high.

If choice b is selected set score to 1.

243. The standard cabin pressure during flight on civil airliners is....

o (a) maintained on ground level conditions.
o (b) is equal to the air pressure on 15000 feet.

- (c) is equal to the air pressure on 8000 feet.

If choice c is selected set score to 1.

244. The constant-differential pressure operation mode cabin is when the cabin altitude....

o (a) remains the same as the flight altitude.
o (b) remains constant as the flight altitude changes.

- (c) is maintained at a constant amount above the outside ambient air pressure.

If choice c is selected set score to 1.

245. What is the function of the positive pressure relief valves?

o (a) They prevent negative cabin pressure differential.
o (b) They control cabin pressure and ensure the cabin altitude does not go above 10.000 ft.

- (c) They relieve excess cabin pressure.

If choice c is selected set score to 1.

246. What are the basic flight deck indications for pressurization?

- o (a) Aircraft altitude, rate of climb and atmospheric pressure.
- o (b) Cabin altitude, ambient temperature and pressure differential.
- • (c) Cabin altitude, cabin rate of climb and pressure differential.

If choice c is selected set score to 1.

247. During take-off the outflow valve is selected to ....

- o (a) fully closed.
- o (b) modulating mode.
- • (c) fully open.

If choice c is selected set score to 1.

248. The outflow of air from the cabin is regulated by ....

- o (a) trim valve.
- o (b) vent valve.
- • (c) outflow valves.

If choice c is selected set score to 1.

249. During the take-off mode the outflow valves are in the pre-pressurisation position. How do the outflow valves move?

- o (a) Move to open position.
- • (b) Move towards closed.
- o (c) In the modulating mode.

If choice b is selected set score to 1.

250. In a modern electronic pressurization system, what happens if the automatic cabin pressure controller fails?

- o (a) The standby cabin pressure controller takes over.
- • (b) The crew has to control the cabin pressure manually.
- o (c) The pressurization system is inoperable and the aircraft must descend to a lower altitude.

If choice b is selected set score to 1.

251. When operating the outflow valve in manual/emergency mode, which motor is used?

- o (a) The AC motor.
- o (b) Both AC and DC motors.
- • (c) The DC motor.

If choice c is selected set score to 1.

252. What places the pressure controller in the depressurisation mode after landing?

- • (a) Engines at idle and the landing gear compressed.
- o (b) Engines at idle.
- o (c) Landing gear compression.

If choice a is selected set score to 1.

253. After landing the outflow valve is set to release the remaining pressure....

- o (a) full open at touchdown.
- • (b) at a fixed rate.
- o (c) rapidly open.

If choice b is selected set score to 1.

254. Ditching control is used for .....

- • (a) closing all valves and inlets.
- o (b) deploying life rafts.
- o (c) rapidly aircraft depressurisation.

If choice a is selected set score to 1.

255. The emergency pressure control valve....

- o (a) is electrically controlled.
- o (b) is fitted to all pressurized aircraft.
- • (c) is not a very refined way of controlling.

If choice c is selected set score to 1.

A ventilation fan has shut-down due to an overheat condition.

The crew can....

- o (a) not restart the fan in flight. Ground crew must reset the system first.
- o (b) restart the fan immediately by resetting the control switch to 'off' and 'on' again.

- (c) restart the fan after it has cooled down.

If choice c is selected set score to 1.

256. How is the emergency pressure control valve operated if the automatic control system fails?

o (a) Electrically

- (b) Manually

o (c) Hydraulically

If choice b is selected set score to 1.

257. In case of a pneumatic duct leak, the crew must....

o (a) turn temperature control to full cold.

- (b) isolate the faulty duct.

o (c) land immediately.

If choice b is selected set score to 1.

258. What protects the aircraft from over-pressurization?

- (a) The positive pressure relief valve.

o (b) The outflow valve.
o (c) Cabin pressure controller.

If choice a is selected set score to 1.

259. What type of fire detection system is a fenwal detection system?

o (a) Thermocouple system.

- (b) Continuous loop system.

o (c) Spot system.

If choice b is selected set score to 1.

260. What is the sniffer used for?

o (a) To detect fire in the avionics compartment.

- (b) To detect smoke in avionics compartment.

o (c) To detect smoke on the flight deck.

If choice b is selected set score to 1.

261. What type of smoke detector contains radioactive material?

- o (a) Photo-electric smoke detectors.
- o (b) Carbon monoxide detectors.
- • (c) Ionizing smoke detectors.

If choice c is selected set score to 1.

262. In a pneumatic fire sensor, what triggers the fire warning?

- • (a) The pressure increase caused by the release of gas from the absorption material acting on a pressure switch.
- o (b) The temperature of the gas inside the steel tubing acting on a temperature switch.
- o (c) The difference pressure between static air pressure and expended air pressure.

If choice a is selected set score to 1.

263. In a dual loop fire detection system. "Loop A" fire warning is shown, this means:

- o (a) Loop A has detected a fire and loop B is faulty.
- • (b) A fire test must be performed to determine the condition of the loops.
- o (c) Loop a is faulty.

If choice b is selected set score to 1.

264. Which of the following areas in an aircraft would only have a smoke detection system and no extinguishing system?

- o (a) Engines.
- o (b) Cargo bay.
- • (c) Avionics bay.

If choice c is selected set score to 1.

265. A carbon monoxide detector has to be replaced .....

- • (a) normally every 90 days.
- o (b) monthly.
- o (c) daily.

If choice a is selected set score to 1.

266. In a continuous loop fire detection system is the Kidde system a ....

- (a) thermistor type.

o (b) pneumatic type.
o (c) bi-metallic spot type.

If choice a is selected set score to 1.

267. A systron-Donner fire detection system uses .....

- (a) helium gas.

o (b) air.
o (c) nitrogen gas.

If choice a is selected set score to 1.

268. How is avionics smoke detected?

o (a) By carbon monoxide detectors in the avionics bay.

- (b) By sampling the air extracted from the avionics compartment racks.

o (c) By smoke detectors in the avionics boxes.

If choice b is selected set score to 1.

269. On a "Pull-and-turn" fire switch, when is the fire bottle discharged?

o (a) By pulling the handle up, turning it to one side and pressing the discharge button.
o (b) By pulling the handle up.

- (c) By pulling the handle up and turning the handle to left or right.

If choice c is selected set score to 1.

270. Some aircraft are fitted with 2 types of fire bottles: dump and metered bottles, used in the cargo compartment. Why is this?

o (a) To ensure there is enough extinguishing agent for the whole aircraft.

- (b) To ensure the concentration of extinguishing agent remains high enough for 180 minutes.

o (c) To extinguishing different types of fires.

If choice b is selected set score to 1.

271. What class of fire can be extinguished with water?

- o (a) Class D
- • (b) Class A
- o (c) All fire classes.

If choice b is selected set score to 1.

272. Where is the lavatory waste bin fire extinguisher localized?

- o (a) In lavatory ceiling.
- o (b) There is no extinguisher in the lavatory.
- • (c) Is usually located above the waste bin.

If choice c is selected set score to 1.

273. What ensures that the agent (Halon 1211) is dispersed in the shortest time possible in a high rate discharge bottle?

- o (a) Halon 1301 or Nitrogen.
- • (b) Nitrogen.
- o (c) Oxygen.

If choice b is selected set score to 1.

274. How can you determine if the lavatory fire bottle has been discharged?

- o (a) By reading the pressure gauge on the bottle.
- • (b) By weighing it.
- o (c) By the temperature indicator strip.

If choice b is selected set score to 1.

275. What does the red indicator disk on the fuselage indicate?

- o (a) Indicates that the fire bottle has been fired.
- o (b) Indicates that the fire bottle has not thermally discharged.
- • (c) Indicates a thermal discharged of the fire bottle.

If choice c is selected set score to 1.

276. Which Halon type doesn't use a pressurisation agent?

- o (a) Halon 1001.
- • (b) Halon 1301.
- o (c) Halon 1211.

If choice b is selected set score to 1.

277. Why is there a strainer installed in the fire bottle discharge valve?

- o (a) To catch any fragment from the bottle.
- o (b) To catch the yellow disk as an indication that the fire bottle is used.
- • (c) To catch any fragment from the frangible disk.

If choice c is selected set score to 1.

278. During a fire bottle squib test, the green light illuminates. This indicates:

- o (a) That the squib has fired.
- • (b) That the squib and firing circuits are OK.
- o (c) That the squib is good.

If choice b is selected set score to 1.

279. Pushing the fire test button does not test:

- o (a) Fire detectors.
- • (b) Squibs.
- o (c) Indications and warnings.

If choice b is selected set score to 1.

280. What indicates the yellow disk of a fire bottle (if installed) when it is ruptured?

- • (a) That the bottle has been fired.
- o (b) That the fire bottle is due for inspection.
- o (c) That the pressure in the fire bottle was to high.

If choice a is selected set score to 1.

281. Does the pressure in a fire bottle vary with the temperature?

- (a) Yes.

o (b) It has no influence on the pressure in a fire bottle.
o (c) Only when the temperature is lower than 10 degrees C.

If choice a is selected set score to 1.

282. How are fire bottles without a gauge checked?

o (a) By doing a tap test on the fire bottle.
o (b) No check has to be done as long as the bottle is not used.

- (c) By removing from the aircraft and placing on a weighing scale.

If choice c is selected set score to 1.

283. When should you use water-type portable fire extinguishers?

o (a) Water-type portable extinguishers can be used for every fire.
o (b) Water-type portable extinguishers are perfect solid combustible materials even metal fires. (ex: brakes and magnesium wheels). Do not use them on flammable liquid fires.

- (c) Water-type portable extinguishers are best for solid combustible fires (paper, fabrics, wood etc.). Never use them on electrical or flammable liquid fire.

If choice c is selected set score to 1.

284. When should you use halon-type portable fire extinguishers?

The halon-type portable fire extinguisher may be used....

o (a) only for fuel fires. (All fuel types)

- (b) for every kind of fire. In the cabin it will be used for fires coming from electrical equipment.

o (c) on solid materials combustible materials only.

If choice b is selected set score to 1.

285. What kind of data do we find on the labels of a portable fire extinguisher?

- (a) The manufacturer name and P/N & S/N. Approval date and instructions to use. Extinguisher type, weight details and last check or expire date. In the bottle usually the manufacturers date is engraved.

o (b) The manufacturer name. P/N & S/N. The colour will say the type (green=water, red=halon). The press indicator will show if the bottle is filled to level.
o (c) The manufacturer and approval date and instructions to use.

If choice a is selected set score to 1.

286. What is the main reason to install only halon-type portable fire extinguisher in the cockpit?

- (a) Because on fires in electronics you may only use halon.

o (b) Because halon fire-bottles can be made much smaller and lighter and so much easier to handle by the pilot from the seat.
o (c) Halon avoids smoke, keeping the cockpit 'visual'.

If choice a is selected set score to 1.

287. On Large transport aircraft fuel is delivered to each engine using …

o (a) the same system for each engine.

- (b) a separate system for each engine.

o (c) a parallel system.

If choice b is selected set score to 1.

288. What must be fitted to an automatic refueling system?

o (a) vents to allow overfueling.
o (b) fuel crossfeed system.

- (c) protection against overfill.

If choice c is selected set score to 1.

289. How is fuel supplied to a turbine engine?

o (a) by a gravity feed pump.

- (b) by a fuel boost pump.

o (c) by suction from the engine driven fuel pump.

If choice b is selected set score to 1.

290. When will a fuel boost pump bypass valve open?

o (a) when both the engine driven and booster pump fail.

- (b) when the booster pump fails.

o (c) when the engine driven pump fails.

If choice b is selected set score to 1.

291. How would you shut-off the low pressure fuel supply to the engine for the purpose of engine removal?

- (a) pull the fire shut-off handle.

o (b) close the cross bleed valve.
o (c) close the HP fuel lock.

If choice a is selected set score to 1.

292. In a fuel system with interconnected vents …

o (a) the expansion space must be 10 % of the tank capacity.
o (b) an expansion space is not required.

- (c) the expansion space must be 2 % of the tank capacity.

If choice c is selected set score to 1.

293. To decrease the amount of **unusable** fuel, what is fitted to the engine feed manifold?

- (a) drain check valve.

o (b) float valve.
o (c) NACA duct.

If choice a is selected set score to 1.

294. What is the purpose of the check valve fitted to a fuel jettison system?

o (a) automatically stop the fuel jettison operation after a period of time.
o (b) prevent the centre from being defuelled.

- (c) prevent the dumping of the outer tanks.

If choice c is selected set score to 1.

295. In what position is the fuel crossfeed valve, when it is not used?

- (a) the closed position.

o (b) its last position.
o (c) the open position.

If choice a is selected set score to 1.

296. Cross feed valves permit fuel transfer from ...

o (a) tank to tank.

- (b) any tank to any engine.

o (c) left tank to right tank.

If choice b is selected set score to 1.

297. How is the amount of Fuel indicated to the pilots?

- (a) Weight (Kgs or Lbs)

o (b) Height (cm or inch)
o (c) Volume (m^3)

If choice a is selected set score to 1.

298. How is the fuel quantity measured in the manual way?

o (a) The electrical resistance between two points.

- (b) With dipstick.

o (c) From the top of the wing visual.

If choice b is selected set score to 1.

299. Pressure refuelling is carried out at ….

o (a) 20 PSI.

- (b) 40 PSI.

o (c) 100 PSI.

If choice b is selected set score to 1.

300. In case of a CG control system failure, the computer switches automatically to an alternate mode. What will happen?

- (a) the trim tank will be directly used to feed the engines..

o (b) jettison of the fuel in the trim tank.
o (c) stops fuel transfer from or to the trim tank.

If choice a is selected set score to 1.

301. What is the purpose of longitudinal balance fuel systems?

- (a) Keep the center of gravity as close as possible to the ideal position.

o (b) Trim the aircraft so that there is no need for trimmable horizontal stabilizers.
o (c) Carry more fuel.

If choice a is selected set score to 1.

302. In an open-centre hydraulic system, selector valves are positioned …

o (a) in parallel.
o (b) either in series or parallel depending on the system design.

• (c) in series.

If choice c is selected set score to 1.

303. What is the pupose of a check valve?

o (a) prevents pump cavitation.

• (b) allows fluid to flow only in one direction.

o (c) prevents overpressure.

If choice b is selected set score to 1.

304. What is the function of a thermal relief valve in an hydraulic system?

• (a) relieve excess pressure.

o (b) prevent excess temperature.
o (c) prevent a leak back of pressure.

If choice a is selected set score to 1.

305. Accumulators as fitted to aircraft hydraulic systems …

o (a) provide additional fluid if leaks occur.

• (b) store fluid under pressure.

o (c) are only ever used in an emergency.

If choice b is selected set score to 1.

306. One reason for fitting an accumulator in a hydraulic system is to ….

• (a) absorb pressure surges.

o (b) minimize the possibility of pump cavitation.
o (c) relieve excess pressure.

If choice a is selected set score to 1.

307. Which component in a hydraulic system ensures immediate response when a service is selected?

o (a) engine driven pump.

o (b) selector.

• (c) accumulator.

If choice c is selected set score to 1.

308. A hydraulic accumulator is charged with initial air pressure of 1000 PSI . When the hydraulic system pressure of 3000 PSI is reached, the air pressure is …

o (a) 1000 PSI.

• (b) 3000 PSI.

o (c) 4000 PSI.

If choice b is selected set score to 1.

309. What is the reason for pressurizing the hydraulic reservoirs?

o (a) provide a reserve of stored energy.

• (b) minimize the possibility of pump cavitation.

o (c) maintain a constant fluid level.

If choice b is selected set score to 1.

310. How do you prevent hydraulic fluid foaming?

• (a) by pressurising.

o (b) vent reservoir to atmosphere.
o (c) pass over a tray.

If choice a is selected set score to 1.

311. What is the purpose of a 'cut-out' valve in a hydraulic system?

o (a) is to limit loss of fluid in the event of pipe fracture.

• (b) is to relieve the pump of load when the operation of services is complete and the accumulator charged with fluid.

o (c) is to prevent creep in jack operated services which have several selected positions.

If choice b is selected set score to 1.

312. A constant volume hydraulic system uses a(n).... to relieve pressure in the system when no services are being used?

o (a) Pressure relief valve.

- o (b) return line back to pump.

- (c) ACOV (Automatic Cut Out Valve).

If choice c is selected set score to 1.

313. What is the normal operating pressure of a hydraulic system?

- o (a) 300 PSI.
- o (b) 1800 PSI.

- (c) 3000 PSI.

If choice c is selected set score to 1.

314. What is the purpose of a shuttle valve?

- (a) change over from main to alternate system in the case of failure.

- o (b) preventing fluid loss from a leaking jack.
- o (c) maintaining fluid press when the emergency system fails.

If choice a is selected set score to 1.

315. What allows a hand pump, which is normally a single cylinder, to operate as a double acting pump?

- o (a) piston ram displacement.
- o (b) relief valve.

- (c) two non-return valves fitted.

If choice c is selected set score to 1.

316. Where is the high pressure filter in a hydraulic system fitted?

- (a) downstream of the pump.

- o (b) in the return line to the reservoir.
- o (c) downstream of the reservoir.

If choice a is selected set score to 1.

317. What happens if a component has an internal hydraulic leak?

- o (a) fluid loss.
- o (b) increase in fluid pressure.

- (c) increase in fluid temperature.

If choice c is selected set score to 1.

318. Throttling valves in a hydraulic system are used to …

- o (a) restrict the rate of pressure build up.
- o (b) limit the maximum pressure.
- • (c) control the flow rate of system operation.

If choice c is selected set score to 1.

319. What is the purpose of a mechanical sequence valve?

- • (a) ensure the correct sequence of landing gears and doors.
- o (b) ensure the correct function of safety switches.
- o (c) ensure the correct operation of brake anti-skid units.

If choice a is selected set score to 1.

320. When a hydraulic lock condition in a jack occurs, what happens to the hydraulic flow?

- • (a) no flow, jack is stationary.
- o (b) flow, but no movement.
- o (c) no flow, but jack continues to move under gravity.

If choice a is selected set score to 1.

321. Under which condition does an air pressure operated ice detector work?

- o (a) A build up of ice causes a torque switch to illuminate a flight deck annunciator.
- • (b) A build up of ice on the leading edge causes a warning light to illuminate on the flight deck.
- o (c) It has to be completely covered in ice before causing an alarm to sound on the flight deck.

If choice b is selected set score to 1.

322. When is a 'hot rod' type of ice detector switched on?

- o (a) when in the air.
- o (b) all the time.
- • (c) when selected by the crew.

If choice c is selected set score to 1.

323. What causes ice formation on wings?

- (a) supercooled water changing state on contact with the wing.

o (b) suspended ice crystals melting on contact with the wing and instantly re-freezing.
o (c) ice crystals forming layers on contact with the wing.

If choice a is selected set score to 1.

324. A serrated rotor ice detector provides warning of ice by …

o (a) ice formation stopping the rotation of a rotary knife edge and illuminating a warning light in the cockpit.
o (b) decreased torque caused by ice formation slowing the rotating wheel and illuminating a warning light in the cockpit.

- (c) increased torque caused by ice formation slowing the rotating wheel and illuminating a warning light in the cockpit.

If choice c is selected set score to 1.

325. An ice deposit formed when liquid water flows over the airframe before freezing, and which is dense, tough and sticks closely to the surface is called …

- (a) glaze ice.

o (b) rime ice.
o (c) hoar frost.

If choice a is selected set score to 1.

326. Which system supplies air for anti-icing of the wings?

o (a) a combustion heater.

- (b) engine compressors.

o (c) air conditioning ducting.

If choice b is selected set score to 1.

327. The inflatable tube of the de-icer boots is made of …

o (a) synthetic rubber.
o (b) natural rubber.

- (c) rubberised fabric.

If choice c is selected set score to 1.

328. How and when is windshield rain repellent applied?

o (a) before rain and spread on window surface by wipers.
o (b) rubbed on the surface of the windscreen, prior to flight.

• (c) during rain and spread on windows surface by wipers.

If choice c is selected set score to 1.

329. What is the source of air for the windscreen pneumatic rain removal system?

o (a) a dedicated pneumatic motor to drive windscreen wipers.

• (b) engine bleed air.

o (c) the venturi windscreen duct.

If choice b is selected set score to 1.

330. What must you be aware of when testing pitot head heaters?

o (a) They should be switched on for five minutes to allow to stabilise before taking ammeter readings.
o (b) They can only be checked by noting the rate of temperature rise of the probe.

• (c) They must only be switched on for the minimum time required to check serviceability.

If choice c is selected set score to 1.

331. What must be done when testing windshield wipers?

o (a) operate them on a dry windshield.

• (b) use a continuous flow of water on the windshield.

o (c) lift the wipers away from the windshield.

If choice b is selected set score to 1.

332. On large transport aircraft, the windshield wiper system is ….

o (a) independent on each side but with the same power source.

• (b) independent on each side with different power sources.

o (c) one system for both sides but with the same power source.

If choice b is selected set score to 1.

333. When operating a windscreen wiper on the ground, make sure to ….

- o (a) place soft cloth between blade and window.
- o (b) use slow wiper only.
- • (c) use water as lubricant when operating.

If choice c is selected set score to 1.

334. On large aircraft, what are bogie type undercarriages used for?

- o (a) Absorb increased landing shock.
- o (b) Prevent skidding.
- • (c) Spread the weight over a large area.

If choice c is selected set score to 1.

335. What does a green/grey spot marking on aircraft tyre casing represent?

- o (a) The light part of the tyre.
- • (b) Leak holes.
- o (c) Military reference.

If choice b is selected set score to 1.

336. What is the function of a fusible plug in an aircraft wheel rim?

- • (a) As overtemperature protection.
- o (b) As overpressure protection.
- o (c) To deflate the tyre before removal.

If choice a is selected set score to 1.

337. What is a stripe or mark extending from the rim of a wheel onto the tire?

- o (a) Indicates the tire is a high-pressure type.
- o (b) A balance mark.
- • (c) A creep mark.

If choice c is selected set score to 1.

338. The cam plate in a nose undercarriage is …

- o (a) part of the shimmy damper.
- o (b) for alignment of the nose wheel steering on nose undercarriage extension.

- (c) to centre the nose wheels for gear retraction.

If choice c is selected set score to 1.

339. On all aircraft equipped with retractable landing gear, some means must be provided to ..

- o (a) retract and extend the landing gear if the normal operating mechanism fails.
- o (b) prevent extension of the landing gear at airspeeds greater than that determined structurally safe.

- (c) extend the landing gear if the normal operating mechanism fails.

If choice c is selected set score to 1.

340. In a hydraulic landing gear system, of which component does a sequence valve ensure proper timing?

- o (a) main gear safety switches (proximity switches).

- (b) landing gear doors.

- o (c) main gear down locks.

If choice b is selected set score to 1.

341. Why must the nose wheel assembly be centered before retraction?

- o (a) The aircraft may swerve on the next landing if the nose wheel is not centered.
- o (b) The tires may be damaged on landing if the nose wheel is not centered

- (c) Damage to the gear or frame structure may occur if it is not centered.

If choice c is selected set score to 1.

The pilot receives an audible warning on the flight deck as the aircraft is descending to land.

The most likely reason for this warning is ...

- o (a) the brake temperature is too high.
- o (b) the wheelspeed is too high.

- (c) the landing gear is not locked down.

If choice c is selected set score to 1.

342. When the landing gear is locked up, the cockpit indicator shows …

- o (a) green light.

- (b) no indication.

- o (c) red light.

If choice b is selected set score to 1.

343. When the landing gear is selected up the sequence of lights is....

o (a) red, green, out.

• (b) green, red, out.

o (c) out, red, green.

If choice b is selected set score to 1.

344. Which of the following are characteristics of a carbon brake?

o (a) have less weight than normal brake units but fade away at high temperatures.
o (b) weigh the same as normal brake units and fade away at high temperatures.

• (c) have less weight than normal brake units and have increased efficiency at high temperatures.

If choice c is selected set score to 1.

345. Aquaplaning can be reduced by …

• (a) an anti-skid device.

o (b) lowering slats.
o (c) increased flaring.

If choice a is selected set score to 1.

346. In an anti-skid system …

• (a) brakes are modulated to give most efficient braking.

o (b) brakes release on falling torque.
o (c) brakes release on rising torque.

If choice a is selected set score to 1.

347. Why is a hydraulic damper fitted to a nose wheel steering system?

o (a) To centralise the nose leg assembly during an up selection.

• (b) to reduce vibration and shimmy.

o (c) to centralise the nose wheel during an up selection.

If choice b is selected set score to 1.

348. What controls the nose wheel steering on a large modern aircraft?

- (a) A separate pilot operated control.

o (b) The control column.
o (c) Differential braking

If choice a is selected set score to 1.

349. A nose wheel steering control system....

- (a) allows the nosewheel to caster within preset limits when in the neutral position.

o (b) allows the nosewheel to caster freely at all times.
o (c) prevents the nosewheel from castering at all times.

If choice a is selected set score to 1.

350. Inadvertent retraction of an electronically controlled landing gear on the ground is....

- (a) prevented by the ground/air logic system.

o (b) not possible because the system is not powerful enough.
o (c) always a danger after the ground locks have been removed.

If choice a is selected set score to 1.

351. What is the advantage that stress sensors have over other air/ground sensing systems?

- (a) Can measure aircraft weight.

o (b) Easier to replace.
o (c) More reliable.

If choice a is selected set score to 1.

352. On aircraft with bogie beams (trucks), what is used to detect air/ground?

o (a) Weight-on-wheel switches.
o (b) Squat switches.

- (c) Truck tilt switches.

If choice c is selected set score to 1.

353. What is the result when the steel target is in close proximity to the proximity sensor?

- (a) A closed switch.

o (b) An open switch.

o (c) A failed switch.

If choice a is selected set score to 1.

354. Cabin chemical oxygen generators are located in?

o (a) The cargo hold.
o (b) The overhead bins.

• (c) The passenger service units.

If choice c is selected set score to 1.

What are the reasons for automatic deployment of emergency oxygen?

1. Cabin depressurization.
2. Smoke in the cabin.
3. Insufficient cabin air in-flow.

o (a) 1 + 2 + 3
o (b) 1 + 2

• (c) 1 + 3

If choice c is selected set score to 1.

355. Oxygen for the flight crew of commercial aircraft comes in which form?

o (a) Chemical oxygen generators.

• (b) Gaseous oxygen.

o (c) Liquid oxygen.

If choice b is selected set score to 1.

356. What is the chemical used in chemical oxygen generators?

o (a) Sodium hydroxide

• (b) Sodium chlorate and iron

o (c) Ozone

If choice b is selected set score to 1.

357. How does an "on board oxygen generation system" (OBOGS) produce oxygen?

• (a) By using molecular filters.

o (b) By using sodium chloride.

o (c) By electrolysis of water.

If choice a is selected set score to 1.

358. In which type of aircraft is liquid oxygen used?

o (a) Aircraft flying at very high altitudes.
o (b) Most large passenger aircraft.

• (c) Military aircraft.

If choice c is selected set score to 1.

359. The pressure regulator on an oxygen demand system regulates the pressure to:

o (a) 400 PSI

• (b) 70 PSI

o (c) 90 PSI

If choice b is selected set score to 1.

360. When the N/100% selector is placed in the 'N' position on a diluter demand regulator, what is the oxygen flow supplied?

• (a) A mixture of oxygen and cabin air while the user is inhaling.

o (b) A mixture of oxygen and cabin air at a constant flow.
o (c) 100% oxygen while he user is inhaling.

If choice a is selected set score to 1.

361. Is it possible to regulate the amount of oxygen from a chemical oxygen generator?

o (a) Only the crew.
o (b) Yes.

• (c) No.

If choice c is selected set score to 1.

362. A green disk on the side of the fuselage is missing, what does this indicate?

o (a) The oxygen bottle pressure is below operational limits.
o (b) The maximum pressure in the oxygen supply lines has been exceeded.

• (c) The maximum pressure in the oxygen cylinder has been exceeded.

If choice c is selected set score to 1.

363. How can you see if a chemical oxygen generator has been expended?

- o (a) By a pressure indicator.
- • (b) By a coloured band of thermal paint.
- o (c) By a pop-out indicator.

If choice b is selected set score to 1.

364. Where can you find a direct reading pressure gauge on an oxygen system?

- o (a) On the oxygen system control panel.
- o (b) On the flight deck.
- • (c) On the oxygen bottle.

If choice c is selected set score to 1.

365. Which indication of a used chemical oxygen generator is provided?

- o (a) The pressure indicator will be in the red zone.
- • (b) A change of coulor of a band of thermal paint around the case.
- o (c) No indication, only by weighing the oxygen generator the status can be determined.

If choice b is selected set score to 1.

366. What is the main advantage of using compressed air over hydraulics or electrical systems?

- • (a) Compressed air is lightweight and since no return system is required, weight is saved.
- o (b) 3000 PSI (210 bar) is at al times available, even with small leaks.
- o (c) Pneumatic operations are almost 100 percent efficient, with only negligible loss due to air friction.

If choice a is selected set score to 1.

367. What is used to prevent moisture from freezing as the pressure drops in a pneumatic system?

- o (a) There is no water or moisture in compressed air.
- • (b) A water separator and a desiccant is fitted which collects the moisture from the air.
- o (c) An electrical heater is fitted which prevents the water from freezing.

If choice b is selected set score to 1.

368. What type of air pump is commonly used in low pressure pneumatic systems?

o (a) Centrifugal pump.

• (b) Vane pump.

o (c) Piston pump.

If choice b is selected set score to 1.

369. What is important about the air entering a dry air pump?

o (a) It must be temperature controlled.

• (b) It must be filtered.

o (c) It must be pressure controlled.

If choice b is selected set score to 1.

370. What regulates the cooled air coming out of the pre-cooler?

o (a) The FAMV (Fan Air Modulating Valve).
o (b) The HPSOV (High Pressure Shut-Off Valve).

• (c) The PRSOV (Pressure Regulating and shut-off Valve).

If choice c is selected set score to 1.

371. What happens if the pneumatic system bleed air is OFF, purposely or by failure?

o (a) a caution appears on the ECAM or EICAS screen.
o (b) the OFF light in the control switch illuminates and a memo appears on the ECAM or EICAS screen.

• (c) the OFF light in the control switch illuminates and a warning appears on the ECAM or EICAS screen.

If choice c is selected set score to 1.

372. How is pneumatic leak detection done?

o (a) Thermal switches.

• (b) Pressure sensors.

o (c) Thermocouples.

If choice b is selected set score to 1.

373. How are the gyroscopes in a pneumatic gyro instrument system on an aircraft at high altitude driven?

o (a) By ram air.

• (b) By air pump suction.

o (c) By bleed air pressure.

If choice b is selected set score to 1.

If assessment score is 0% to 100% Feedback