

Note: Due to this being copy-pasted off the website and having all of its HTML elements removed the formatting may not always be great. My apologies about that. Other than that it should all mostly check out.

1: (Q1) About which axis does rolling occur?

- o A: lateral axis.
- o B: vertical axis.
- o C: longitudinal axis.

2: (Q2) The axes of an aircraft by definition must all pass through the:

- o A: aircraft datum.
- o B: centre of pressure (CP).
- o C: centre of gravity (CG).

3: (Q3) 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 down, the right aileron moves down and the left aileron moves up.
- o B: the elevator goes up, the right aileron moves up and the left aileron moves down.
- o C: the elevator goes down, the right aileron moves up and the left aileron moves down.

4: (Q4) When inner and outer ailerons are mounted, outer ailerons are used:

- o A: at low speeds.
- o B: during take-off only.
- o C: at high speeds.

5: (Q5) A jet aircraft equipped with inboard and outboard ailerons is cruising at its normal cruise Mach number. Which of the following conditions is correct?

- o A: only the outboard ailerons are active.
- o B: only the inboard ailerons are active.
- o C: the inboard and outboard ailerons are active.

6: (Q6) When ailerons are deployed, what happens to the drag? Drag increases on....

- o A: the down going wing.
- o B: the up going wing.
- o C: both wings.

7: (Q7) How can adverse yaw when rolling about the longitudinal axis be prevented?

- o A: a smaller fin.
- o B: differential ailerons.
- o C: equal deflection lateral control surfaces.

8: (Q8) In a Frise aileron control system....

- o A: the down-going aileron allows air to spill 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.
- o C: the up-going aileron produces increased drag.

9: (Q9) In normal flight, if the control wheel is moved to the left, what will the aileron on the right do?

- o A: move up.
- o B: move down.
- o C: remain in the same position.

10: (Q10) What is the main purpose of a Frise aileron?

- o A: Increase drag on the up going wing.
- o B: Increase drag on the down going wing.
- o C: Help pilot overcome aerodynamic loads.

11: (Q11) Which flight control surfaces does have a Flaperon function?

- o A: flaps and elevators.
- o B: flaps and ailerons.
- o C: flaps and speed brakes.

12: (Q12) On an aircraft fitted with elevons in normal flight. What happens to the Elevons when the control column is moved forward?

- o A: both move down.
- o B: remain stationary.
- o C: both move up.

13: (Q13) Which control surfaces provide directional and pitch control?

- o A: tailerons.
- o B: ruddervators.
- o C: elevons

14: (Q14) How does a delta wing aircraft move about the pitch and roll axis?

- o A: ailerons.
- o B: elevons.
- o C: elevators.

15: (Q15) What do ruddervators do?

- o A: control pitch and yaw.
- o B: control yaw and roll.
- o C: control pitch and roll.

16: (Q16) What control surface movements will make an aircraft fitted with ruddervators yaw to the left?

- o A: Left ruddervator lowered, right ruddervator raised.
- o B: Both ruddervators raised
- o C: Right ruddervator lowered, left ruddervator raised.

17: (Q17) When a Leading edge flap is fully extended, what is the slot in the wing for?

- o A: To increase the lift.
- o B: To re-energise the boundary layer.
- o C: To allow the flap to retract into it when it retracts.

18: (Q18) What is the effect of a Fowler flap on the wing?

- o A: increases camber only.

- o B: increases wing area only.
- o C: increases camber and wing area.

19: (Q19) 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: reduce stalling speed.
- o C: replace flaps.

20: (Q20) The purpose of a spring tab is to....

- o A: provide a reduction in the pilot's effort to move the controls against high air loads.
- o B: provide feel back in a control system.
- o C: provide a constant load resistance to surface deflection at all speeds.

21: (Q21) When an aircraft fitted with spoilers is rolled to the left, what is the movement of the spoilers?

- o A: left spoiler is deflected up and the right down.
- o B: left upper spoiler up and left lower spoiler down.
- o C: left spoiler is deflected up.

22: (Q22) To which flight control are wing spoilers, when used asymmetrically, associated?

- o A: ailerons.
- o B: rudder.
- o C: elevators.

23: (Q23) With respect to flight spoilers, when do they operate?

- o A: only operate in flight.
- o B: can operate both on the ground and in flight.
- o C: only operate on the ground.

24: (Q24) 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
- o B: 0.3 to 0.8 M
- o C: 0.8 to 1.2 M

25: (Q25) Aerodynamic speeds vary all the way from low subsonic to hypersonic. The limits of supersonic speed range are

- o A: 1.2 to 5 M
- o B: 0.3 to 0.8 M
- o C: 0.8 to 1.2 M

26: (Q26) 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: 0.3 to 0.8 M
- o C: 1.2 to 5 M

27: (Q27) Critical Mach Number (M_{crit}) is:

- o A: The Mach number at which shock waves are formed at the leading edge of the airfoil.
 - o B: The Mach number at which compressibility effects first appear.
 - o C: The Mach number at which sonic flow is first achieved.
- 28: (Q28) Above the critical Mach number, the drag coefficient
- o A: remains the same.
 - o B: decreases.
 - o C: increases.
- 29: (Q29) To increase critical Mach number
- o A: tailerons are fitted.
 - o B: the wings are swept.
 - o C: elevons are fitted.
- 30: (Q30) An aircraft....
- o A: has only one critical mach number.
 - o B: has more than one critical mach number on different parts of the aircraft.
 - o C: has more than one critical mach number on the wing only.
- 31: (Q31) The angle of attack of a blade is the
- o A: angle between the chord line and relative airflow.
 - o B: angle between the chord line and plane of rotation.
 - o C: angle between the aircraft longitudinal axis and relative air flow.
- 32: (Q32) The tail rotor
- o A: produces a force opposing torque reaction.
 - o B: is not subject to dissymmetry of lift.
 - o C: produces a force in the same direction as torque reaction.
- 33: (Q33) What is autorotation?
- o A: spinning of the helicopter fuselage due to the loss of anti-torque.
 - o B: loss off directional control.
 - o C: descent of the helicopter with power off.
- 34: (Q34) How does a rotor generate lift?
- o A: low pressure above the blade.
 - o B: high pressure above the blade.
 - o C: down-wash below the blade.
- 35: (Q35) What limits the maximum forward speed of a helicopter?
- o A: retreating blade stall and the forward speed of the advancing blade.
 - o B: the shape of the fuselage.
 - o C: engine power.
- 36: (Q36) With an increase in its angle of attack, what happens to the drag acting on a rotor blade?
- o A: increases.
 - o B: remains constant.
 - o C: decreases.

- 37: (Q37) What will the advancing blade do during forward flight?
- o A: flap up.
 - o B: flap down.
 - o C: lag.
- 38: (Q38) What prevents the rotor blades from 'folding up' during rotation?
- o A: the weight.
 - o B: the centrifugal force.
 - o C: the lift force.
- 39: (Q39) What happens to the drag, when the angle of attack is increased on a main rotor blade?
- o A: there is an increase in drag.
 - o B: there is a reduction in drag.
 - o C: there is no change in drag.
- 40: (Q40) What is the ability of the rotor blade to move up and down called?
- o A: dragging.
 - o B: feathering.
 - o C: flapping.
- 41: (Q41) 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.
 - o C: They counter-rotate on a common shaft.
- 42: (Q42) Which movement can each individual blade of a semi-rigid rotor system make independently?
- o A: flap and change pitch.
 - o B: flap, change pitch and drag.
 - o C: flap only.
- 43: (Q43) 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.
 - o C: increases the pitch angle the same amount on all blades.
- 44: (Q44) The primary purpose of the tail rotor is
- o A: to counteract torque.
 - o B: to give directional control.
 - o C: to give lateral stability.
- 45: (Q45) Which control input must be used to lift the helicopter vertically into the hover?
- o A: collective pitch lever has to be lowered.
 - o B: collective pitch lever has to be raised.
 - o C: cyclic pitch lever has to be raised.
- 46: (Q46) Where is the helicopter throttle hand grip located?
- o A: throttle box.

- o B: cyclic stick.
- o C: collective lever.

47: (Q47) What happens when raising the collective lever?

- o A: the pitch is decreased on all blades.
- o B: the angle of attack is decreased on the retreating blade.
- o C: the pitch is increased on all blades.

48: (Q48) What happens to the RPM of the rotor, when lifting the collective lever during an autorotative descent?

- o A: reduce.
- o B: remain the same.
- o C: increase.

49: (Q49) What is the result of moving the helicopter forward?

- o A: advancing blade flapping up.
- o B: pitch angle of all blades decreasing.
- o C: retreating blade flapping up.

50: (Q50) Which of the following is an example of a failsafe structure?

- o A: Single stringer.
- o B: Nose radome.
- o C: Multiple Spars.

51: (Q51) What is a damage tolerant design?

- o A: allows for certain damage to the structure to go un-repaired between scheduled maintenance.
- o B: allows for damage to structure but loses its structural strength.
- o C: is applied only to secondary structure.

52: (Q52) In a monocoque structure, which component carries the majority of the loads?

- o A: Stringers.
- o B: Skin.
- o C: Longerons.

53: (Q53) What is the benefit of using a semi-monocoque construction?

- o A: does not require rivetting.
- o B: no safety factor is required
- o C: provides a stronger construction than a monocoque.

54: (Q54) What are the main longitudinal members in a fuselage called?

- o A: longerons.
- o B: spars.
- o C: frames.

55: (Q55) How are skin panels strengthened?

- o A: cleats.
- o B: stringers.
- o C: struts.

56: (Q56) Safe-life is

- o A: the maximum number of flying hours that should elapse before a major structural failure occurs.
- o 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.

57: (Q57) What is a Fuselage body Station?

- o A: lateral point on the fuselage.
- o B: longitudinal point on the fuselage.
- o C: lateral point on a wing.

58: (Q58) What is ATA Zone 100?

- o A: vertical fin.
- o B: lower fuselage.
- o C: upper fuselage.

59: (Q59) Which system is used to determine precise points located on an aircraft?

- o A: frame stations, vertical lines and lateral lines.
- o B: longitudinal, vertical and lateral lines.
- o C: frame stations, water lines and buttock lines.

60: (Q60) Water Lines (WLs) are measured points on a

- o A: vertical line.
- o B: horizontal line.
- o C: wing line.

61: (Q61) What are water lines?

- o A: Measurements from the centre line.
- o B: Vertical measurement lines.
- o C: Horizontal measurement lines.

62: (Q62) Fuselage station numbers are measured from the front of the aircraft. In what unit are they measured?

- o A: inches.
- o B: feet.
- o C: feet and inches.

63: (Q63) What is the measurement of the fuselage location along the Z-coordinate?

- o A: water line.
- o B: butt line.
- o C: fuselage station.

64: (Q64) How should all electronic equipment bondings be installed in the aircraft structure?

- o A: With a low current path to the airframe structure.
- o B: With a low impedance path to the airframe structure.
- o C: With a high impedance path to the airframe structure.

65: (Q65) 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.
 - o C: Self locking nuts of all metal construction.
- 66: (Q66) What is used to protect the nose radome from lightning strikes?
- o A: Bonding wire.
 - o B: Lightning diverter strips.
 - o C: The radome is composite material and does not require a special lightning protection.
- 67: (Q67) What are used on today's aircraft to protect the avionics from lightning strikes?
- o A: Circuit breakers with high sensitivity.
 - o B: Surge protection devices.
 - o C: Bonding wires.
- 68: (Q68) What causes the glow which can be seen during the initial stage of a lightning strike?
- o A: Burning of metal.
 - o B: Ionization of the air.
 - o C: Static discharging.
- 69: (Q69) The relationship between the electric field and the magnetic field in a dipole or monopole antenna are....
- o A: in phase on a monopole and out of phase in a dipole.
 - o B: out of phase by 90°.
 - o C: in phase.
- 70: (Q70) 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.
 - o C: unfed elements which make the radiation pattern directional.
- 71: (Q71) Skin effect is most likely to occur:
- o A: at high power levels up to VHF.
 - o B: in radar systems fed by rectangular waveguides.
 - o C: at the higher frequencies i.e. VHF and above.
- 72: (Q72) For a frequency of 121.95 MHz, what is the wavelength?
- o A: 2.46 m
 - o B: 2.46 cm
 - o C: 2.46 km
- 73: (Q73) What is the major advantage of the telegraph over earlier methods of communication?
- o A: Range and speed.
 - o B: Security.
 - o C: Larger messages.
- 74: (Q74) Radio-frequency waves cannot be seen for which of the following reasons?
- o A: Because radio-frequency waves are below the sensitivity range of the human eye.
 - o B: Because radio-frequency energy is low powered.

o C: Because radio-frequency waves are above the sensitivity range of the human eye.

75: (Q75) Radio waves travel at what speed?

- o A: Speed of the Earth's rotation.
- o B: Speed of light.
- o C: Speed of sound.

76: (Q76) 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?

- o A: Transverse.
- o B: Concentric.
- o C: Longitudinal.

77: (Q77) 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?

- o A: Longitudinal.
- o B: Concentric.
- o C: Transverse.

78: (Q78) 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?

- o A: 9,6 kHz
- o B: 0,96 MHz
- o C: 960 Hz

79: (Q79) Which of the following statements about a wave is the law of reflection?

- o A: The angle of incidence is equal to the angle of reflection.
- o B: The angle of incidence is not equal to the refracted wave.
- o C: The angle of incidence is equal to the refracted wave.

80: (Q80) Varying which of the following wave characteristics will cause the length of sound waves to vary?

- o A: Frequency.
- o B: Amplitude.
- o C: Phase.

81: (Q81) What will be the effect on the wavelength of radio wave if the frequency increases? The wavelength....

- o A: will decrease.
- o B: will increase.
- o C: is not influenced.

82: (Q82) An increase in the frequency of a radio wave will have what effect, if any, on the velocity of the radio wave?

- o A: None.
- o B: Decrease.
- o C: Increase.

83: (Q83) The bending of a radio wave because of a change in its velocity through a medium is known as....

- A: diffraction.
- B: reflection.
- C: refraction.

84: (Q84) Electrically charged particles that affect the propagation of radio waves are found in what atmospheric layer?

- A: Troposphere.
- B: Ionosphere.
- C: Stratosphere.

85: (Q85) Ionization in the atmosphere is produced chiefly by which of the following types of radiation?

- A: Alpha radiation.
- B: cosmic radiation.
- C: ultraviolet radiation.

86: (Q86) The density of ionized layers is normally greatest during which of the following periods?

- A: Between afternoon and sunset.
- B: Between early morning and late afternoon.
- C: At night.

87: (Q87) Compared to the other ionospheric layers at higher altitudes, the ionization density of the D layer is

- A: relatively high.
- B: about the same.
- C: relatively low.

88: (Q88) What two layers in the ionosphere recombine and largely disappear at night?

- A: F1 and F2
- B: D and F
- C: D and E

89: (Q89) For hf-radio communications covering long distances, what is the most important layer of the ionosphere?

- A: C
- B: D
- C: F

90: (Q90) The distance between the transmitter and the nearest point at which refracted waves return to earth is referred to as the

- A: reception distance.
- B: skip distance.
- C: return distance.

91: (Q91) Which irregular variation in ionospheric conditions can cause a waiting period of several days before communications return to normal?

- A: Sudden ionospheric disturbance.

- o B: Ionospheric storms.
- o C: Sporadic E

92: (Q92) At frequencies above 100 MHz, the greatest attenuation of rf energy from raindrops is caused by which of the following factors?

- o A: absorption.
- o B: scattering.
- o C: ducting.

93: (Q93) 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: low cloud masses.
- o B: temperature inversions.
- o C: ionospheric storms.

94: (Q94) 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.
- o C: Guide electrical energy from point to point.

95: (Q95) A measurement of the voltage to current ratio (V_{in}/I_{in}) at the input end of a transmission line is called the

- o A: input impedance.
- o B: input-gain rate.
- o C: voltage-gain ratio.

96: (Q96) Uniform capacitance throughout the length of the line is an advantage of which of the following transmission lines?

- o A: Coaxial line.
- o B: Shielded pair.
- o C: Twisted pair.

97: (Q97) Energy is transmitted from a transmitter into space using which of the following devices?

- o A: a delay time.
- o B: an antenna.
- o C: a receiver.

98: (Q98) An antenna that can be mounted to radiate rf energy either vertically or horizontally is classified as which of the following types?

- o A: Quarter-wave.
- o B: Marconi.
- o C: Hertz.

99: (Q99) A complete antenna system consists of which of the following components?

- o A: A feeder line, a coupling device, and an antenna.
- o B: A feeder, a coupling device, and a transmitter.
- o C: An antenna, a transmission line, and a receiver.

100: (Q100) What is the wavelength of the basic Marconi antenna?

- o A: 1/2 wavelength.
- o B: wavelength.
- o C: 1/4 wavelength.

101: (Q101) Attenuation is....

- o A: the combination of multiple radio signals.
- o B: the increase of power of a radio signal.
- o C: the loss of power of a radio signal.

102: (Q102) The VHF (very high frequency) range of the radio spectrum is the band extending from

- o A: 300 to 3000 MHz.
- o B: 3 to 30 GHz
- o C: 30 MHz to 300 MHz.

103: (Q103) The VHF (very high frequency) is the standard civil short range communication facility using the band of frequencies between

- o A: 1.5 to 1.6 GHz.
- o B: 2 and 29.999 MHz.
- o C: 118 and 136 MHz.

104: (Q104) 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
- o B: 360 - 8.33 kHz
- o C: 720 - 25 kHz

105: (Q105) The mode of operation of the VHF comms transceiver is

- o A: single channel simplex.
- o B: double channel duplex.
- o C: single channel duplex.

106: (Q106) Satisfactory two-way VHF communication can typically be maintained up to miles, this range dependent on the aircraft height.

- o A: 20
- o B: 200
- o C: 2000

107: (Q107) A squelch circuit disables the receiver output,

- o A: when a SELCAL is received from ground stations equipped with a coding device.
- o B: when satcom is selected.
- o C: when no signals are being received so preventing noise being fed to the crew headsets between ground transmissions.

108: (Q108) The HF (high frequency) range of the radio spectrum is the band extending from

- o A: 2 - 30 MHz
- o B: 300 MHz to 3 GHz
- o C: 30 MHz to 300 MHz.

109: (109) The HFmatches the antenna impedance to the transceiver output over the HF frequency range.

- o A: antenna coupler
- o B: FDAU (Flight data acquisition unit)
- o C: transceiver

110: (Q110) The Selcal (Selective Calling) can be used by....

- o A: VHF system only.
- o B: HF system only.
- o C: VHF and HF systems.

111: (Q111)Emergency locator transmitters are self-contained, self-powered radio transmitters, designed to transmit a signal on the international distress bands of (civilian) and (military).

- o A: 121.5 MHz - 243 MHz
- o B: 30 MHz - 300 MHz
- o C: 108.10 MHz - 112 MHz

112: (Q112) New ELT s will transmit on so that the signal can be picked up by the Search and Rescue satellite network.

- o A: 108.10 MHz
- o B: 121.5 MHz
- o C: 406.025 MHz

113: (Q113) 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: 1, 2, 3 and 4.
- o C: 2, 3 and 4.

114: (Q114) When activated, the battery of an ELT must be capable of furnishing power for signal transmission for at least ...

- o A: 48 hours.
- o B: 28 days.
- o C: 24 hours.

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.
- o C: 1, 2 and 3.

116: (Q116) 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.

- o A: only 1 and 2.

- o B: 1, 2 and 3.
- o C: 1, 2, 3 and 4.

117: (Q117) The Cockpit Voice Recorder of a large transport aircraft will always store the last...

- o A: 120 minutes.
- o B: 30 minutes.
- o C: 60 minutes.

118: (Q118) 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.
- o C: last 30 minutes.

119: (Q119) On an ILS approach what will cause the aircraft to fly onto the beam?

- o A: Glideslope deviation.
- o B: Course deviation.
- o C: Radio deviation.

120: (Q120) What is the glide slope frequency range?

- o A: 108 - 112 Mhz.
- o B: 329 - 335 Mhz.
- o C: 108 - 112 Ghz.

121: (Q121) ILS is subject to false glide paths resulting from:

- o A: multiple lobes of radiation patterns in the vertical plane.
- o B: ground returns ahead of the antennas.
- o C: false signals reflected by nearby obstacles.

122: (Q122) The aircraft DME receiver is able to accept replies to its own transmissions and reject replies to other aircraft interrogations because:

- o A: pulse pairs are discreet to a particular aircraft.
- o B: transmission frequencies are 63 MHz different for each aircraft.
- o C: pulse pairs are amplitude modulated with the aircraft registration.

123: (Q123) The MIDDLE MARKER of an Instrument Landing System (ILS) facility is identified audibly and visually by a series of:

- o A: alternate dots and dashes and an amber/yellow light flashing.
- o B: dashes and an amber light flashing.
- o C: dots and a white light flashing.

124: (Q124) The amplitude modulation and the colour of an outer marker (OM) is:

- o A: 400 Hz, blue.
- o B: 3000 Hz, amber.
- o C: 400 Hz, amber.

125: (Q125) 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.

- o C: hear the IDENT of some NDB stations radiating a continuous wave signal.
- 126: (Q126) In which frequency band do VOR transmitters operate?
- o A: UHF.
 - o B: VHF.
 - o C: SHF.
- 127: (Q127) What is the colour sequence when passing over an Outer, Middle and Inner Marker beacon?
- o A: amber(yellow) - white - green
 - o B: blue - green - white
 - o C: blue - amber(yellow) - white
- 128: (Q128) Transmissions from VOR facilities may be adversely affected by....
- o A: night effect.
 - o B: static interference.
 - o C: uneven propagation over irregular ground surfaces.
- 129: (Q129) 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) AM - (2) FM - (3) anti-clockwise.
 - o B: (1) AM - (2) FM - (3) clockwise.
 - o C: (1) FM - (2) AM - (3) clockwise.
- 130: (Q130) Concerning conventional and Doppler VORs (DVOR), which of the following is correct?
- o A: The DVOR has a higher audio ident tone than the standard VOR.
 - o B: It is not possible for the instrumentation display to determine which type is being used.
 - o C: The DVOR will always have a 'D' in the ident.
- 131: (Q131) A conventional VOR....
- o A: has an AM reference signal and a 150 Hz variable signal.
 - o B: has an FM reference signal and an AM variable signal.
 - o C: has an AM reference signal and a FM variable signal.
- 132: (Q132) In an ADF system, night effect is most pronounced:
- o A: at dusk and dawn.
 - o B: during long winter nights.
 - o C: when the aircraft is at high altitude.
- 133: (Q133) Bearing information in an ADF system is....
- o A: measured and calculated by the ADF system.
 - o B: provided by the flight management system.
 - o C: received by the antenna.
- 134: (Q134) Every dot on the localizer deviation scale is....
- o A: 10 nm from center line
 - o B: 5 nm from center line
 - o C: 1 nm from center line

135: (Q135) What are the primary navigation inputs used by RNAV system?

- o A: Nav Aids, INS, FMC.
- o B: INS, Nav Aids, TAS and Drift.
- o C: Nav Aids, Mapping Radar, FMC.

136: (Q136) Which one of the following inputs to an Area Navigation System (R-NAV) comes from an external, not on-board, system?

- o A: VOR/DME radial/distance.
- o B: Magnetic heading.
- o C: Inertial Navigation System (INS) position.

137: (Q137) What is the required accuracy of a precision area navigation system?

- o A: 5 nautical miles.
- o B: 10 nautical miles.
- o C: 1 nautical mile.

138: (Q138) A basic RNAV system will determine tracking information from....

- o A: twin DME.
- o B: VOR/DME.
- o C: Twin VOR.

139: (Q139) The sequence of entering information in a MCDU is....

- o A: IDENT - POS INIT - RTE
- o B: POS INIT - IDENT - RTE
- o C: IDENT - RTE - POS INIT

140: (Q140) The IRS position can be initialized....

- o A: at designated positions en-route and on the ground.
- o B: on the ground and in flight with VOR/DME.
- o C: on the ground only.

141: (Q141) The period of validity of the navigational database is:

- o A: 91 days.
- o B: 28 days.
- o C: 1 month.

142: (Q142) When power is applied to the FMS, the CDU shows the....

- o A: climb (CLB) page for take-off.
- o B: ident page.
- o C: route (RTE) page.

143: (Q143) What is an FMC?

- o A: A flight management computer.
- o B: A flight management inertial reference system.
- o C: An autopilot/flight director system.

144: (Q144) Which of the following is the FMS normal operating condition in the cruise?

- o A: LNAV and VNAV.
- o B: LNAV or VNAV.
- o C: LNAV only

145: (Q145) If there is no (navigation) radio updating, what effect will this have on the FMS?

- o A: this FMS will automatically update the system.
- o B: this may cause the FMS to deviate from the desired track.
- o C: this will have no effect on the FMS.

146: (Q146) In the FMS vertical navigation (VNAV) climb mode the throttles are used for

- o A: correction for minor speed deviations.
- o B: maintaining a computed EPR.
- o C: controlling to a maximum thrust.

147: (Q147) To know the valid data base on the FMS

- o A: call up the relevant page on the CDU.
- o B: call up the relevant current status.
- o C: perform a BITE check.

148: (Q148) If one FMS fails in a dual system

- o A: FMS display transfers data automatically from serviceable computer.
- o B: system operation will not be affected.
- o C: FMS CDU on fail side goes blank.

149: (Q149) To carry out FMS database update on FMS

- o A: use database loader.
- o B: insert new data on CDU.
- o C: insert new EPROM.

150: (Q150) The Flight Management Computer (FMC) position is:

- o A: the actual position of the aircraft at any point in time.
- o B: another source of aircraft position; it is independent of other position sources (IRS, Radio, ILS etc).
- o C: the computed position based on a number of sources (IRS, Radio, ILS, GPS etc).

151: (Q151) How many satellites are required for GNSS?

- o A: 8
- o B: 4
- o C: 6 (90° apart)

152: (Q152) The space segment of GPS consists of a minimum of....

- o A: 24 satellites.
- o B: 27 satellites.
- o C: 21 satellites.

153: (Q153) GPS sends different codes, what are these codes?

- o A: C/A (coarse/acquisition) code only.
- o B: C/A code and P (precision) code.
- o C: P code only.

154: (Q154) What is the pseudo-random code used by all civilian GPS users?

- o A: the P code.
- o B: the Y code.
- o C: the C/A code.

155: (Q155) What is the minimum number of satellites required for a Satellite-Assisted Navigation System (GNSS/GPS)?

- o A: 4
- o B: 3
- o C: 2

156: (Q156) 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, longitude and altitude.
- o B: Latitude and longitude.
- o C: Latitude, longitude, altitude and time.

157: (Q157) Which of the following combinations of satellite navigation systems provide the most accurate position fixes in air navigation?

- o A: GLONASS and COSPAS-SARSAT.
- o B: NAVSTAR/GPS and GLONASS.
- o C: NNSS-Transit and GLONASS.

158: (Q158) The satellites (GPS) provide: position, time data and....

- o A: distance from departure.
- o B: velocity.
- o C: flightplan.

159: (Q159) The electrolyte in a NiCd battery is?

- o A: Lithium based.
- o B: Acid based.
- o C: Alkaline based.

160: (Q160) What is the nominal voltage of a NiCad battery cell?

- o A: 2 volts.
- o B: 24 volts.
- o C: 1.2 volts.

161: (Q161) Which is the most efficient way of charging a battery?

- o A: Fast
- o B: Slow
- o C: Both slow and fast are equally efficient

162: (Q162) Which type of battery can experience cell reversal and how can it be prevented?

- o A: Lead-acid battery. Prevented by fast charging battery.
- o B: NiCad battery. Prevented by never fully discharging the battery.
- o C: NiCad battery. Prevented by always fully discharging the battery.

163: (Q163) What happens at the end of the charge of a NiCad battery?

- o A: The battery heats up.
- o B: CO₂ is generated,
- o C: The cell voltage drops.

164: (Q164) What product does the sump jar contain in the vent line of a lead-acid battery installation?

- o A: Distilled water.
- o B: Bicarbonate of soda and water.
- o C: Boric acid.

165: (Q165) What is the dis-advantage of series wound generators?

- o A: When the aircraft electrical load increases, the output voltage increases.
- o B: When the aircraft electrical load increases, the output current increases.
- o C: When the aircraft electrical load increases, the output voltage remains the same.

166: (Q166) What is the purpose of a rectifier?

- o A: Convert the DC output into AC.
- o B: Convert the AC output to DC.
- o C: Control the output voltage of a parallel wound generator.

167: (Q167) What determines the amount of induced voltage?

- o A: The diameter of the conductor.
- o B: The length of the field frame.
- o C: The speed at which the conductor moves through the magnetic field.

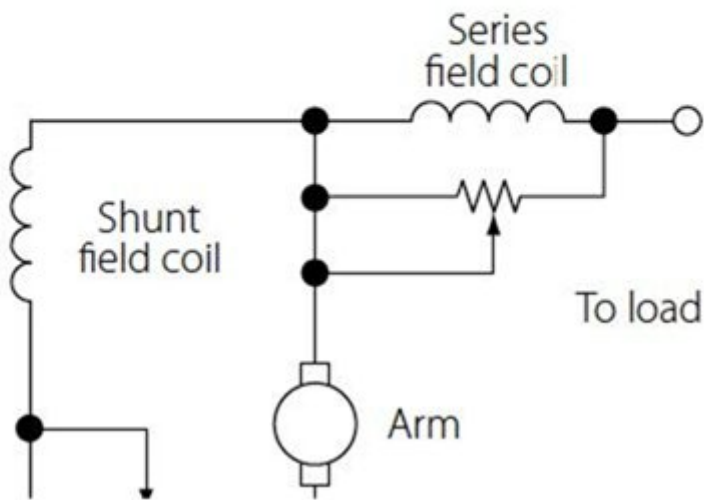
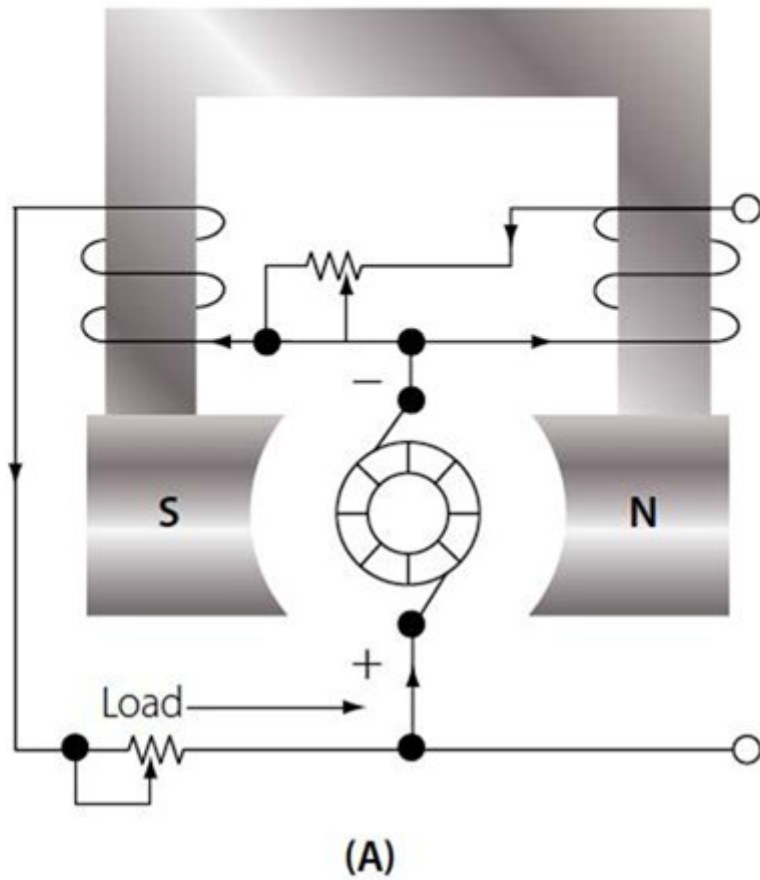
168: (Q168) How do you call the component that completes the magnetic circuit between the poles in a DC generator?

- o A: The yoke.
- o B: The brushes.
- o C: The armature.

169: (Q169) The output of a single coil generator is

- o A: a saw foot.
- o B: a sine-wave.
- o C: a flat line.

170: (Q170) What type of voltage regulator is shown in the figure below?



o A: Parallel wound

generator.

- o B: Series wound generator.
- o C: Compound wound generator.

171: (Q171) What type of generator / alternator is used in a variable speed constant frequency system?

- o A: DC generator.

- o B: Brushless alternator.
- o C: DC alternator.

172: (Q172) Which of the following systems does not use a constant speed drive?

- o A: APU alternator.
- o B: Integrated drive generator (IDG)
- o C: Engine driven alternator.

173: (Q173) What is the output speed of a constant speed drive?

- o A: Variable speed depending on engine speed.
- o B: 6000rpm
- o C: 12000rpm

174: (Q174) If the over-speed protection circuit in a CSD (Constant Speed Drive) has activated, reset is...

- o A: only possible in the workshop.
- o B: possible from the flight deck.
- o C: possible during Line Maintenance.

175: (Q175) The output sine waves of a 3-phase alternator will be separated by:

- o A: 60 degrees
- o B: 90 degrees
- o C: 120 degrees

176: (Q176) In which type of unit can a permanent magnet generator (PMG) be found?

- o A: DC generator.
- o B: DC alternator.
- o C: Brushless AC alternator.

177: (Q177) Which of the following statements about the ram air turbine is false?

- o A: The RAT can sometimes also supply hydraulic power.
- o B: The RAT can deploy automatically on the ground.
- o C: The RAT can be deployed manually.

178: (Q178) In a constant speed motor generator, what powers the generator?

- o A: An electric motor powered by the RAT generator.
- o B: A hydraulic motor powered by a hydraulic pump driven by the RAT.
- o C: An electric motor powered by the battery.

179: (Q179) What powers the hydraulic motor generator (HMG)?

- o A: RAT hydraulic pump.
- o B: Hydraulic hand pump.
- o C: Main hydraulic system.

180: (Q180) When will the hydraulic motor generator (HMG) supply power?

- o A: Manually, when the pilot switches it on after both main AC buses lose power.
- o B: Automatically when both main AC buses lose power.
- o C: Automatically when the main battery is discharged.

181: (Q181) The ram air turbine will supply....

- o A: three phase DC power.
- o B: single phase AC power.
- o C: DC power.

182: (Q182) What is the function of the flyweight governor (installed in the RAT)?

- o A: It controls the output voltage of the hydraulic motor generator (HMG).
- o B: It controls the speed of the ram air turbine.
- o C: It controls the speed of the constant speed motor generator (CSM/G).

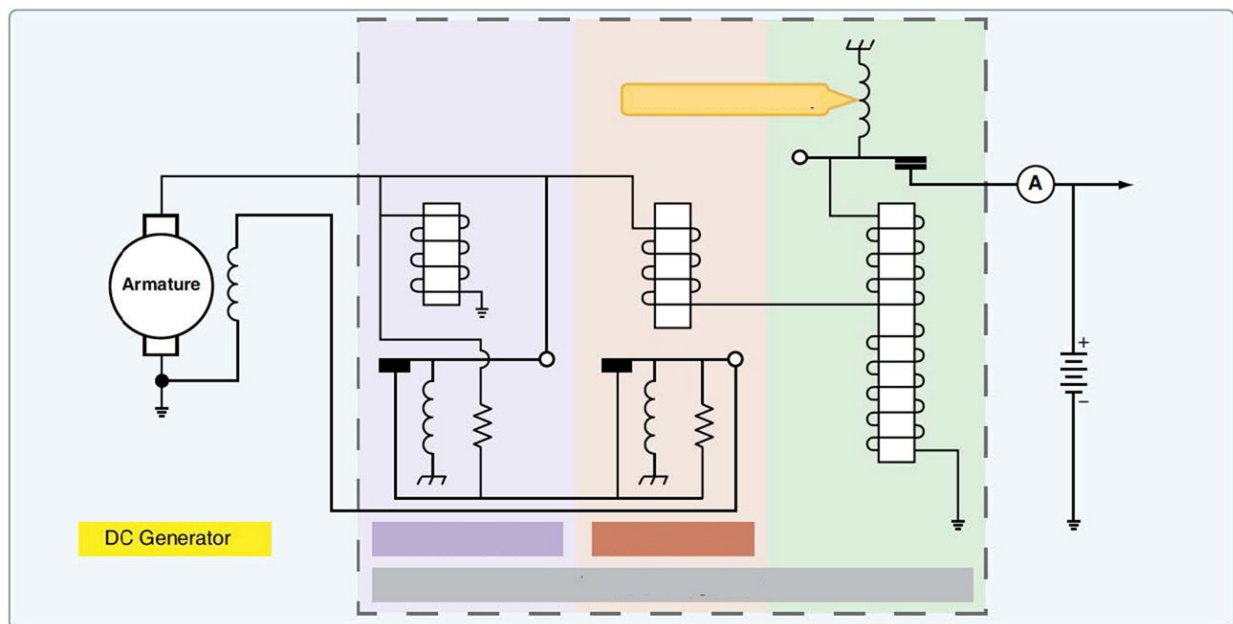
183: (Q183) How is voltage regulation achieved on DC generators? By changing the....

- o A: field current.
- o B: field voltage.
- o C: generator speed.

184: (Q184) Which of the following is NOT part of a three-unit voltage regulator?

- o A: Current limiter.
- o B: Open phase protection.
- o C: Reverse current relay.

185: (Q185) What type of voltage regulator is shown in the figure below?



- o A: Three-unit voltage regulator.
- o B: Reverse current delay.
- o C: Carbon pile voltage regulator.

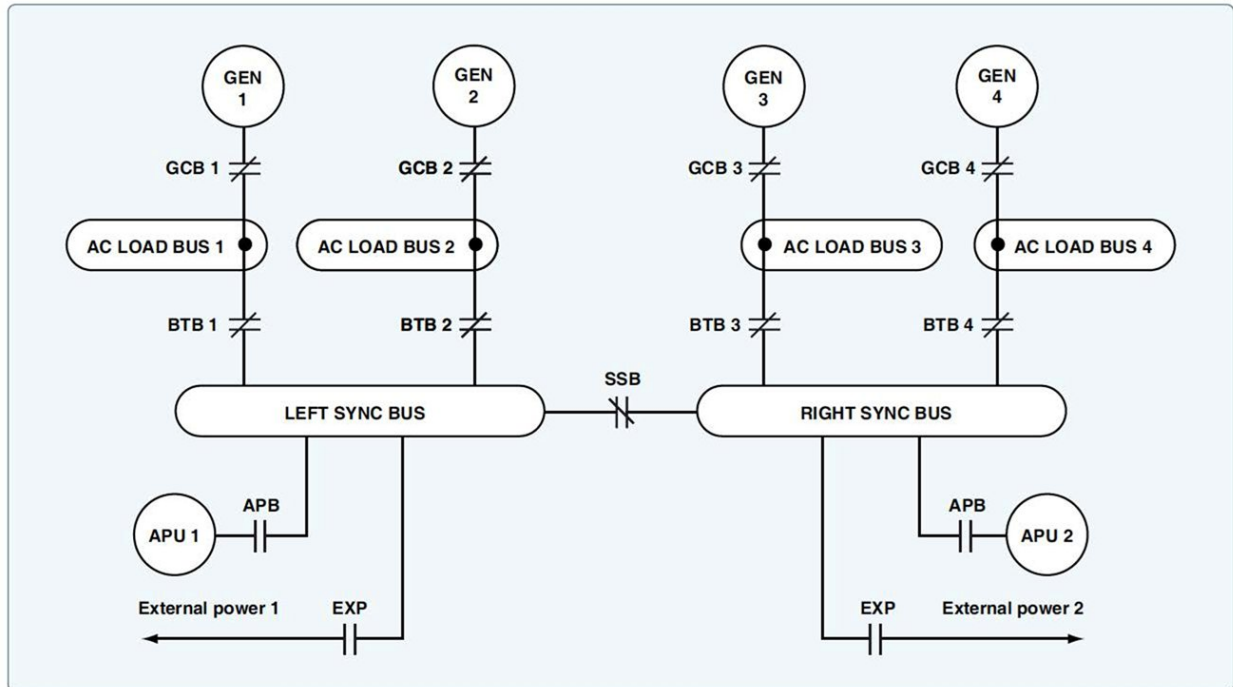
186: (Q186) In a parallel bus configuration the generators will:

- o A: Divide the load, with the strongest generators taking the biggest load.
- o B: Each supply their own AC bus.
- o C: Share the load equally among them.

187: (Q187) Emergency lighting is part of which service?

- o A: Vital.
- o B: Essential.
- o C: Ground.

188: (Q188) What type of bus is show in the figure below?



- o A: Emergency bus
- o B: Split Parallel Bus
- o C: Parallel bus

189: (Q189) 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.
- o C: Measure current in an electrical circuit.

190: (Q190) Which of the following statements about current transformers is true?

- o A: The primary winding should never be left open when in operation.
- o B: The secondary winding should never be left open when in operation.
- o C: Current transformers always have a square transformer core.

191: (Q191) Which formula represents the transformer ratio?

- o A: $V_2 / V_1 = N_2 / N_1$
- o B: $V_2 \times V_1 = N_2 \times N_1$
- o C: $V_2 / N_2 = V_1 / N_1$

192: (Q192) Transformer rectifiers are used for:

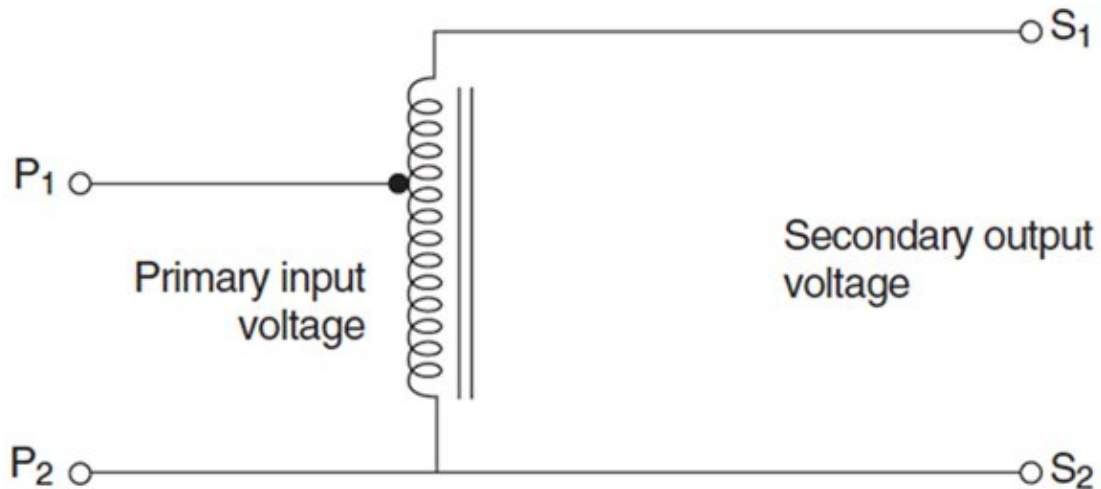
- o A: Converting AC into DC.
- o B: Boosting the output voltage from 28V to 110V.

o C: Converting DC into AC.

193: (Q193) What provides overheat warning in a transformer rectifier unit?

- o A: Thermal switch.
- o B: Voltage sensor.
- o C: Thermocouple.

194: (Q194) What type of transformer is shown in the figure below?



- o A: Transformer rectifier.
- o B: Autotransformer
- o C: Current transformer

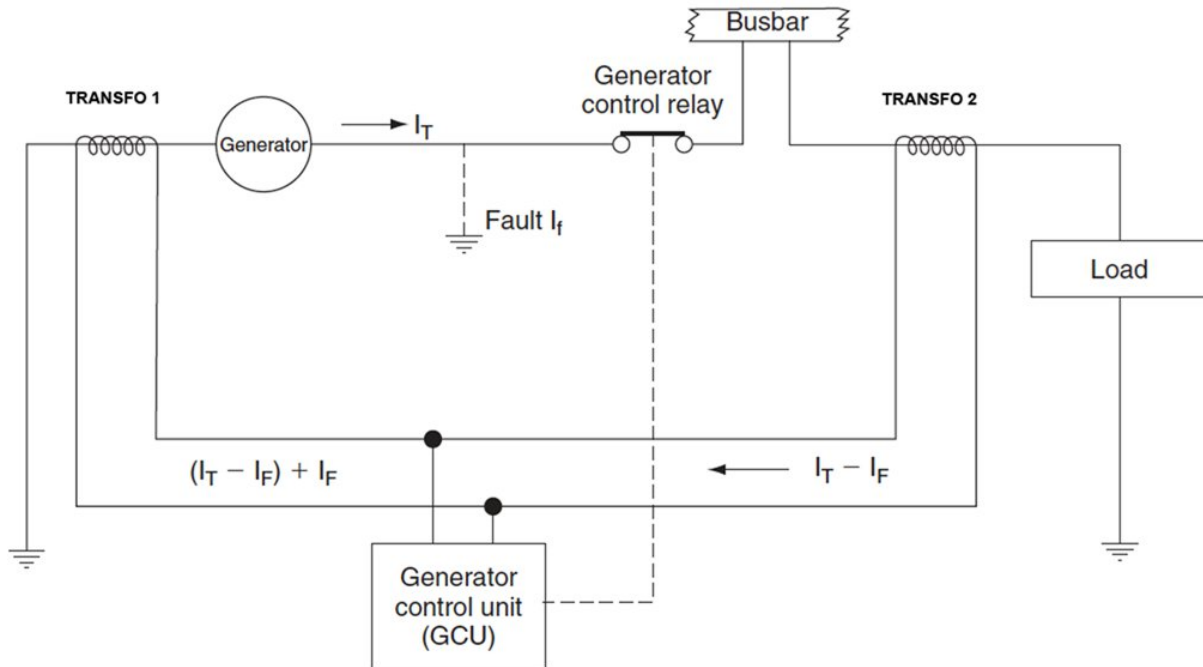
195: (Q195) Which of the following circuit breakers CANNOT be reset while the fault exists?

- o A: Trip free circuit breaker.
- o B: Automatic reset circuit breaker.
- o C: Electromagnetic circuit breakers.

196: (Q196) Where in the circuit would a fuse be installed?

- o A: As close to the unit to be protected as much as possible.
- o B: Where access to replace the fuse is easiest.
- o C: As close to the power source as possible.

197: (Q197) In the differential protections circuit in the figure below, what type of transformers would be TRANSFO 1 and TRANSFO 2?



- o A: Both are current transformers
- o B: TRANSFO 1 is a current transformer, TRANSFO 2 is a voltage transformer
- o C: Both are voltage transformers

198: (Q198) On a large commercial aircraft, which bus will be powered as soon as external power is connected?

- o A: The ground handling bus.
- o B: The external power bus.
- o C: Battery bus.

199: (Q199) 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.
- o 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.

200: (Q200) When connecting external power, what prevents the application of reverse polarity to a DC powered aircraft?

- o A: A reverse current switch.
- o B: An irreversible external power connector (fool proof).
- o C: A reverse polarity diode.

201: (Q201) Which lights can be used to detect ice build-up?

- o A: Wing scan lights.
- o B: Runway turn-off lights.
- o C: Position lights.

202: (Q202) Where will you find taxi lights?

- o A: In the wing root.
- o B: In the wing leading edges.
- o C: On the nose landing gear.

203: (Q203) Lights fitted with a dual filament are used as:

- o 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.

204: (Q204) What kind of light is used as cabin flood lighting?

- o A: Spot lights
- o B: Fluorescent tubes.
- o C: Incandescent light bulbs.

205: (Q205) Which lights are located in the passenger service units?

- o A: Cabin emergency lights.
- o B: Spotlights.
- o C: Flood lights.

206: (Q206) Who controls the 'no smoking' and 'fasten seat belts' lights?

- o A: Passenger.
- o B: Flight attendant.
- o C: Pilot.

207: (Q207) Which statement is true?

- o A: When the internal emergency light switch is used both internal and external emergency light come on.
- o B: When operating the external emergency light switch both internal and external lights come on.
- o C: Operating the internal emergency light switch only turns on the internal emergency lights.

208: (Q208) To ensure correct operation of the emergency lighting system, what must be done at specific maintenance intervals?

- o A: Replace the battery pack.
- o B: Replace all emergency light bulbs.
- o C: Recharge the battery packs.

209: (Q209) The external emergency lights are used for:

- o A: Illuminating the area around the aircraft to help rescue workers.
- o B: Illuminating the escape slides.
- o C: Identifying the entry doors to help rescue workers locate them.

210: (Q210) Which of the following statements is incorrect? A turbo compressor....

- o A: can be switched on and off by the crew.
- o B: is used as a supplemental use source of bleed air.
- o C: is used on turbo-prop and piston engine.

211: (Q211) During normal stages of flight, the engine bleed air source comes from:

- o A: The high pressure stage of the compressor.

- o B: The low pressure stage of the compressor.
- o C: Ram air.

212: (Q212) Why does the engine bleed air supply come from the low and high stage of the compressor?

- o 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.

213: (Q213) Where is the ground air conditioning cart used for?

- o A: Running the de-icing system.
- o B: Starting the engines.
- o C: Supplying the cabin with conditioned air, when only the cabin needs to be conditioned.

214: (Q214) The RAM air supply is used....

- o A: only on unpressurized aircraft.
- o B: as an alternate source to power the air-conditioning packs.
- o C: as an emergency air source on pressurized aircraft to ventilate the cockpit and the cabin.

215: (Q215) Which of the following bleed air sources CANNOT supply the aircraft systems in flight?

- o A: Engines.
- o B: Auxiliary power unit.
- o C: Pneumatic ground cart.

216: (Q216) What supplies the warm air in a Bleed air air-conditioning system?

- o A: The compressor of the gasturbine engine.
- o B: The engine exhaust heat.
- o C: The gas turbine exhaust.

217: (Q217) What is the purpose of the air conditioning system?

- o A: Control the temperature, air flow and humidity.
- o B: Increase the temperature of air and humidity.
- o C: Increase and decrease the temperature of air and pressurize the aircraft.

218: (Q218) An air-to-air heat exchanger is provided to....

- o A: increase the air supply temperature.
- o B: provide an emergency ram air supply.
- o C: reduce the air supply temperature.

219: (Q219) The aircraft air conditioning system keeps the....

- o A: cabin pressure at 8000 ft cabin altitude.
- o B: humidity high in the cabin.
- o C: cabin altitude (pressure) at 10.000 ft.

220: (Q220) A refrigerant is used in....

- o A: a vapour cycle.
- o B: a pneumatic pump.
- o C: an air cycle machine.

221: (Q221) Where is the water separator located?

- o A: Downstream of anti ice valve.
- o B: Downstream of the turbine.
- o C: Downstream of the compressor.

222: (Q222) What is the function of the turbine in an air cycle machine? The turbine drives the compressor to....

- o A: pressurise aircraft.
- o B: decrease temperature.
- o C: increase temperature.

223: (Q223) When the ram air passes through the primary heat exchanger, where does the ram air in a turbo-fan cold air system flow to?

- o A: Via large fan to ram air outlet.
- o B: Turbine.
- o C: Inter cooler or secondary heat exchanger.

224: (Q224) The heat exchanger in a turbo-fan system is cooled by...

- o A: ambient ram air.
- o B: air bled from the main cabin supply duct.
- o C: engine bleed air or blower air.

225: (Q225) When the refrigerant loses heat in a vapour cycle system....

- o A: the vapour converts to a liquid.
- o B: the liquid converts to a vapour.
- o C: the liquid evaporates to the environment.

226: (Q226) 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: Fan drawn ambient air.
- o C: Air bled directly from engine or through blower.

227: (Q227) Heating for pressure cabins is obtained from....

- o A: air cycle machine.
- o B: only by adding heat electrically to the air supply.
- o C: air supply heated by adding hot bleed air.

228: (Q228) What is the benefit of injecting water in the ram air duct?

- o A: Improve the efficiency of the heat exchanger.
- o B: Cool the air cycle machine.
- o C: Make the cabin air less dry.

229: (Q229) What is the function of a pack control valve?

- o A: Control the outlet temperature of the pack.
- o B: Control the air flow into the cabin.
- o C: Control the airflow out of the cabin.

230: (Q230) What needs to be done to the bypass valve to lower the pack outlet temperature?

- o A: Opened.
- o B: Closed.
- o C: Remain the same.

231: (Q231) A large aircraft air conditioning system's cabin temperature control....

- o 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.

232: (Q232) Temperature control of cabin air is achieved by....

- o A: varying the ambient airflow to the heat exchanger.
- o B: controlling the speed of the air cycle machine.
- o C: regulating the amount of hot air added to the conditioned air.

233: (Q233) How is in pressurized aircraft, temperature controlling mainly achieved?

- o A: Adding hot bleed air to the conditioned air.
- o B: Adding heat to the pressurising air.
- o C: Varying cabin pressure.

234: (Q234)Conditioned air is...

- o A: temperature and pressure adjusted.
- o B: moisture removed.
- o C: oxygen added.

235: (Q235) What must be the minimum humidity in the cabin?

- o A: 20 %.
- o B: 60 %.
- o C: 30 %.

236: (Q236) The temperature within the cabin of the aircraft is normally maintained at

- o A: 21 °C to 27 °C.
- o B: 20 °C to 24 °C.
- o C: 12 °C to 18 °C.

237: (Q237) What determines the effective temperature of a cabin?

- o A: Temperature only.
- o B: Temperature and humidity.
- o C: Temperature, humidity, thermal inertia and heat load.

238: (Q238) A cabin humidifier is operated....

- o A: at high altitudes.
- o B: on the ground.
- o C: at low altitudes.

239: (Q239) In an airconditioning system, the purpose of the condenser is to condense water in the air before it goes to the....

- o A: bypass valve.
- o B: heat exchanger.

o C: water extractor.

240: (Q240) How is the pressure inside the cabin controlled?

- o A: By regulating the air conditioning pack output pressure.
- o B: By controlling the amount of bleed air to the air conditioning packs.
- o C: By using one or more outflow valves.

241: (Q241) Which of the following modes of pressurization places the highest load demands on the aircraft structure?

- o A: Isobaric mode.
- o B: Constant-differential pressure.
- o C: Unpressurized.

242: (Q242) The outflow valve of a pressurized cabin system opens when the cabin pressure is....

- o A: too high.
- o B: too low.
- o C: too low or too high.

243: (Q243) The standard cabin pressure during flight on civil airliners is....

- o A: is equal to the air pressure on 15000 feet.
- o B: maintained on ground level conditions.
- o C: is equal to the air pressure on 8000 feet.

244: (Q244) The constant-differential pressure operation mode cabin is when the cabin altitude....

- o A: is maintained at a constant amount above the outside ambient air pressure.
- o B: remains the same as the flight altitude.
- o C: remains constant as the flight altitude changes.

245: (Q245) What is the function of the positive pressure relief valves?

- o A: They control cabin pressure and ensure the cabin altitude does not go above 10.000 ft.
- o B: They relieve excess cabin pressure.
- o C: They prevent negative cabin pressure differential.

246: (Q246) What are the basic flight deck indications for pressurization?

- o A: Aircraft altitude, rate of climb and atmospheric pressure.
- o B: Cabin altitude, cabin rate of climb and pressure differential.
- o C: Cabin altitude, ambient temperature and pressure differential.

247: (Q247) During take-off the outflow valve is selected to

- o A: modulating mode.
- o B: fully closed.
- o C: fully open.

248: (Q248) The outflow of air from the cabin is regulated by

- o A: outflow valves.
- o B: vent valve.
- o C: trim valve.

249: (Q249) During the take-off mode the outflow valves are in the pre-pressurisation position. How do the outflow valves move?

- o A: Move towards closed.
- o B: In the modulating mode.
- o C: Move to open position.

250: (Q250) In a modern electronic pressurization system, what happens if the automatic cabin pressure controller fails?

- o A: The crew has to control the cabin pressure manually.
- o B: The pressurization system is inoperable and the aircraft must descend to a lower altitude.
- o C: The standby cabin pressure controller takes over.

251: (Q251) When operating the outflow valve in manual/emergency mode, which motor is used?

- o A: The AC motor.
- o B: The DC motor.
- o C: Both AC and DC motors.

252: (Q252) What places the pressure controller in the depressurisation mode after landing?

- o A: Landing gear compression.
- o B: Engines at idle.
- o C: Engines at idle and the landing gear compressed.

253: (Q253) After landing the outflow valve is set to release the remaining pressure....

- o A: rapidly open.
- o B: at a fixed rate.
- o C: full open at touchdown.

254: (Q254) Ditching control is used for.....

- o A: closing all valves and inlets.
- o B: deploying life rafts.
- o C: rapidly aircraft depressurisation.

255: (Q255) The emergency pressure control valve....

- o A: is not a very refined way of controlling.
- o B: is fitted to all pressurized aircraft.
- o C: is electrically controlled.

256: (Q256) How is the emergency pressure control valve operated if the automatic control system fails?

- o A: Electrically
- o B: Hydraulically
- o C: Manually

257: (Q257) In case of a pneumatic duct leak, the crew must....

- o A: isolate the faulty duct.
- o B: turn temperature control to full cold.
- o C: land immediately.

258: (Q258) What protects the aircraft from over-pressurization?

- o A: Cabin pressure controller.
- o B: The positive pressure relief valve.
- o C: The outflow valve.

259: (Q259) What type of fire detection system is a fenwal detection system?

- o A: Thermocouple system.
- o B: Continuous loop system.
- o C: Spot system.

260: (Q260) What is the sniffer used for?

- o A: To detect smoke in avionics compartment.
- o B: To detect fire in the avionics compartment.
- o C: To detect smoke on the flight deck.

261: (Q261) What type of smoke detector contains radioactive material?

- o A: Carbon monoxide detectors.
- o B: Photo-electric smoke detectors.
- o C: Ionizing smoke detectors.

262: (Q262) In a pneumatic fire sensor, what triggers the fire warning?

- o A: The difference pressure between static air pressure and expended air pressure.
- o B: The pressure increase caused by the release of gas from the absorption material acting on a pressure switch.
- o C: The temperature of the gas inside the steel tubing acting on a temperature switch.

263: (Q263) In a dual loop fire detection system. 'Loop A' fire warning is shown, this means:

- o A: A fire test must be performed to determine the condition of the loops.
- o B: Loop a is faulty.
- o C: Loop A has detected a fire and loop B is faulty.

264: (Q264) Which of the following areas in an aircraft would only have a smoke detection system and no extinguishing system?

- o A: Avionics bay.
- o B: Cargo bay.
- o C: Engines.

265: (Q265) A carbon monoxide detector has to be replaced.....

- o A: normally every 90 days.
- o B: monthly.
- o C: daily.

266: (Q266) In a continuous loop fire detection system is the Kidde system a....

- o A: thermistor type.
- o B: bi-metallic spot type.
- o C: pneumatic type.

267: (Q267) A systron-Donner fire detection system uses.....

- o A: air.

- o B: nitrogen gas.
- o C: helium gas.

268: (Q268) How is avionics smoke detected?

- o A: By smoke detectors in the avionics boxes.
- o B: By sampling the air extracted from the avionics compartment racks.
- o C: By carbon monoxide detectors in the avionics bay.

269: (Q269) On a 'Pull-and-turn' fire switch, when is the fire bottle discharged?

- o A: By pulling the handle up and turning the handle to left or right.
- o B: By pulling the handle up.
- o C: By pulling the handle up, turning it to one side and pressing the discharge button.

270: (Q270) 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 extinguishing different types of fires.
- o B: To ensure the concentration of extinguishing agent remains high enough for 180 minutes.
- o C: To ensure there is enough extinguishing agent for the whole aircraft.

271: (Q271) What class of fire can be extinguished with water?

- o A: Class D
- o B: All fire classes.
- o C: Class A

272: (Q272) Where is the lavatory waste bin fire extinguisher localized?

- o A: In lavatory ceiling.
- o B: Is usually located above the waste bin.
- o C: There is no extinguisher in the lavatory.

273: (Q273) What ensures that the agent (Halon 1211) is dispersed in the shortest time possible in a high rate discharge bottle?

- o A: Nitrogen.
- o B: Halon 1301 or Nitrogen.
- o C: Oxygen.

274: (Q274) How can you determine if the lavatory fire bottle has been discharged?

- o A: By weighing it.
- o B: By the temperature indicator strip.
- o C: By reading the pressure gauge on the bottle.

275: (Q275) What does the red indicator disk on the fuselage indicate?

- o A: Indicates that the fire bottle has not thermally discharged.
- o B: Indicates that the fire bottle has been fired.
- o C: Indicates a thermal discharged of the fire bottle.

276: (Q276) Which Halon type doesn't use a pressurisation agent?

- o A: Halon 1001.
- o B: Halon 1301.

o C: Halon 1211.

277: (Q277) Why is there a strainer installed in the fire bottle discharge valve?

- o A: To catch the yellow disk as an indication that the fire bottle is used.
- o B: To catch any fragment from the frangible disk.
- o C: To catch any fragment from the bottle.

278: (Q278) During a fire bottle squib test, the green light illuminates. This indicates:

- o A: That the squib and firing circuits are OK.
- o B: That the squib is good.
- o C: That the squib has fired.

279: (Q279) Pushing the fire test button does not test:

- o A: Indications and warnings.
- o B: Fire detectors.
- o C: Squibs.

280: (Q280) What indicates the yellow disk of a fire bottle (if installed) when it is ruptured?

- o A: That the fire bottle is due for inspection.
- o B: That the pressure in the fire bottle was too high.
- o C: That the bottle has been fired.

281: (Q281) Does the pressure in a fire bottle vary with the temperature?

- o 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.

282: (Q282) 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.
- o C: By removing from the aircraft and placing on a weighing scale.

283: (Q283) When should you use water-type portable fire extinguishers?

- o A: Water-type portable extinguishers are best for solid combustible fires (paper, fabrics, wood etc.). Never use them on electrical or flammable liquid 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.
- o C: Water-type portable extinguishers can be used for every fire.

284: (Q284) 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)
- o 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.

285: (Q285) What kind of data do we find on the labels of a portable fire extinguisher?

- o A: 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 B: 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 C: The manufacturer and approval date and instructions to use.

286: (Q286) What is the main reason to install only halon-type portable fire extinguisher in the cockpit?

o A: Halon avoids smoke, keeping the cockpit 'visual'.

o B: Because on fires in electronics you may only use halon.

o C: Because halon fire-bottles can be made much smaller and lighter and so much easier to handle by the pilot from the seat.

287: (Q287) On Large transport aircraft fuel is delivered to each engine using ...

o A: a separate system for each engine.

o B: a parallel system.

o C: the same system for each engine.

288: (Q288) What must be fitted to an automatic refueling system?

o A: fuel crossfeed system.

o B: protection against overfill.

o C: vents to allow overfueling.

289: (Q289) How is fuel supplied to a turbine engine?

o A: by a fuel boost pump.

o B: by suction from the engine driven fuel pump.

o C: by a gravity feed pump.

290: (Q290) When will a fuel boost pump bypass valve open?

o A: when the booster pump fails.

o B: when both the engine driven and booster pump fail.

o C: when the engine driven pump fails.

291: (Q291) How would you shut-off the low pressure fuel supply to the engine for the purpose of engine removal?

o A: pull the fire shut-off handle.

o B: close the HP fuel lock.

o C: close the cross bleed valve.

292: (Q292) 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.

o C: the expansion space must be 2 % of the tank capacity.

293: (Q293) To decrease the amount of unusable fuel, what is fitted to the engine feed manifold?

o A: float valve.

o B: NACA duct.

o C: drain check valve.

294: (Q294) What is the purpose of the check valve fitted to a fuel jettison system?

- o A: prevent the centre from being defueled.
- o B: automatically stop the fuel jettison operation after a period of time.
- o C: prevent the dumping of the outer tanks.

295: (Q295) In what position is the fuel crossfeed valve, when it is not used?

- o A: its last position.
- o B: the open position.
- o C: the closed position.

296: (Q296) Cross feed valves permit fuel transfer from ...

- o A: any tank to any engine.
- o B: tank to tank.
- o C: left tank to right tank.

297: (Q297) How is the amount of Fuel indicated to the pilots?

- o A: Height (cm or inch)
- o B: Weight (Kgs or Lbs)
- o C: Volume (m3)

298: (Q298) How is the fuel quantity measured in the manual way?

- o A: The electrical resistance between two points.
- o B: From the top of the wing visual.
- o C: With dipstick.

299: (Q299) Pressure refuelling is carried out at....

- o A: 40 PSI.
- o B: 20 PSI.
- o C: 100 PSI.

300: (Q300) In case of a CG control system failure, the computer switches automatically to an alternate mode. What will happen?

- o A: jettison of the fuel in the trim tank.
- o B: stops fuel transfer from or to the trim tank.
- o C: the trim tank will be directly used to feed the engines..

301: (Q301) What is the purpose of longitudinal balance fuel systems?

- o 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.

302: (Q302) 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.
- o C: in series.

303: (Q303) What is the purpose of a check valve?

- o A: allows fluid to flow only in one direction.
- o B: prevents overpressure.

- o C: prevents pump cavitation.
- 304: (Q304) What is the function of a thermal relief valve in an hydraulic system?
- o A: prevent a leak back of pressure.
 - o B: relieve excess pressure.
 - o C: prevent excess temperature.
- 305: (Q305) Accumulators as fitted to aircraft hydraulic systems ...
- o A: store fluid under pressure.
 - o B: provide additional fluid if leaks occur.
 - o C: are only ever used in an emergency.
- 306: (Q306) One reason for fitting an accumulator in a hydraulic system is to....
- o A: minimize the possibility of pump cavitation.
 - o B: absorb pressure surges.
 - o C: relieve excess pressure.
- 307: (Q307) Which component in a hydraulic system ensures immediate response when a service is selected?
- o A: selector.
 - o B: engine driven pump.
 - o C: accumulator.
- 308: (Q308) 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.
 - o B: 3000 PSI.
 - o C: 4000 PSI.
- 309: (Q309) What is the reason for pressurizing the hydraulic reservoirs?
- o A: provide a reserve of stored energy.
 - o B: minimize the possibility of pump cavitation.
 - o C: maintain a constant fluid level.
- 310: (Q310) How do you prevent hydraulic fluid foaming?
- o A: vent reservoir to atmosphere.
 - o B: pass over a tray.
 - o C: by pressurising.
- 311: (Q311) 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.
 - o B: is to prevent creep in jack operated services which have several selected positions.
 - o C: is to relieve the pump of load when the operation of services is complete and the accumulator charged with fluid.
- 312: (Q312) A constant volume hydraulic system uses a(n).... to relieve pressure in the system when no services are being used?
- o A: return line back to pump.

- o B: ACOV (Automatic Cut Out Valve).
- o C: Pressure relief valve.

313: (Q313) What is the normal operating pressure of a hydraulic system?

- o A: 1800 PSI.
- o B: 300 PSI.
- o C: 3000 PSI.

314: (Q314) What is the purpose of a shuttle valve?

- o 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 pressure when the emergency system fails.

315: (Q315) What allows a hand pump, which is normally a single cylinder, to operate as a double acting pump?

- o A: relief valve.
- o B: piston ram displacement.
- o C: two non-return valves fitted.

316: (Q316) Where is the high pressure filter in a hydraulic system fitted?

- o A: downstream of the reservoir.
- o B: in the return line to the reservoir.
- o C: downstream of the pump.

317: (Q317) What happens if a component has an internal hydraulic leak?

- o A: increase in fluid pressure.
- o B: increase in fluid temperature.
- o C: fluid loss.

318: (Q318) Throttling valves in a hydraulic system are used to ...

- o A: restrict the rate of pressure build up.
- o B: limit the maximum pressure.
- o C: control the flow rate of system operation.

319: (Q319) What is the purpose of a mechanical sequence valve?

- o 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.

320: (Q320) When a hydraulic lock condition in a jack occurs, what happens to the hydraulic flow?

- o A: no flow, but jack continues to move under gravity.
- o B: flow, but no movement.
- o C: no flow, jack is stationary.

321: (Q321) 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.
- o B: It has to be completely covered in ice before causing an alarm to sound on the flight deck.
- o C: A build up of ice on the leading edge causes a warning light to illuminate on the flight deck.

322: (Q322) When is a 'hot rod' type of ice detector switched on?

- o A: when in the air.
- o B: when selected by the crew.
- o C: all the time.

323: (Q323) What causes ice formation on wings?

- o A: suspended ice crystals melting on contact with the wing and instantly re-freezing.
- o B: ice crystals forming layers on contact with the wing.
- o C: supercooled water changing state on contact with the wing.

324: (Q324) A serrated rotor ice detector provides warning of ice by ...

- o A: decreased torque caused by ice formation slowing the rotating wheel and illuminating a warning light in the cockpit.
- o B: increased torque caused by ice formation slowing the rotating wheel and illuminating a warning light in the cockpit.
- o C: ice formation stopping the rotation of a rotary knife edge and illuminating a warning light in the cockpit.

325: (Q325) 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 ...

- o A: rime ice.
- o B: hoar frost.
- o C: glaze ice.

326: (Q326) Which system supplies air for anti-icing of the wings?

- o A: a combustion heater.
- o B: engine compressors.
- o C: air conditioning ducting.

327: (Q327) The inflatable tube of the de-icer boots is made of ...

- o A: natural rubber.
- o B: synthetic rubber.
- o C: rubberised fabric.

328: (Q328) How and when is windshield rain repellent applied?

- o A: rubbed on the surface of the windscreen, prior to flight.
- o B: before rain and spread on window surface by wipers.
- o C: during rain and spread on windows surface by wipers.

329: (Q329) What is the source of air for the windscreen pneumatic rain removal system?

- o A: engine bleed air.
- o B: the venturi windscreen duct.
- o C: a dedicated pneumatic motor to drive windscreen wipers.

330: (Q330) What must you be aware of when testing pitot head heaters?

- o A: They must only be switched on for the minimum time required to check serviceability.
- o B: They can only be checked by noting the rate of temperature rise of the probe.

- o C: They should be switched on for five minutes to allow to stabilise before taking ammeter readings.
- 331: (Q331) What must be done when testing windshield wipers?
- o A: operate them on a dry windshield.
 - o B: use a continuous flow of water on the windshield.
 - o C: lift the wipers away from the windshield.
- 332: (Q332) On large transport aircraft, the windshield wiper system is....
- o A: one system for both sides but with the same power source.
 - o B: independent on each side but with the same power source.
 - o C: independent on each side with different power sources.
- 333: (Q333) When operating a windscreen wiper on the ground, make sure to....
- o A: use slow wiper only.
 - o B: use water as lubricant when operating.
 - o C: place soft cloth between blade and window.
- 334: (Q334) On large aircraft, what are bogie type undercarriages used for?
- o A: Prevent skidding.
 - o B: Spread the weight over a large area.
 - o C: Absorb increased landing shock.
- 335: (Q335) What does a green/grey spot marking on aircraft tyre casing represent?
- o A: Military reference.
 - o B: The light part of the tyre.
 - o C: Leak holes.
- 336: (Q336) What is the function of a fusible plug in an aircraft wheel rim?
- o A: As overpressure protection.
 - o B: As overtemperature protection.
 - o C: To deflate the tyre before removal.
- 337: (Q337) What is a stripe or mark extending from the rim of a wheel onto the tire?
- o A: A balance mark.
 - o B: Indicates the tire is a high-pressure type.
 - o C: A creep mark.
- 338: (Q338) The cam plate in a nose undercarriage is ...
- o A: to centre the nose wheels for gear retraction.
 - o B: part of the shimmy damper.
 - o C: for alignment of the nose wheel steering on nose undercarriage extension.
- 339: (Q339) On all aircraft equipped with retractable landing gear, some means must be provided to ..
- o A: prevent extension of the landing gear at airspeeds greater than that determined structurally safe.
 - o B: extend the landing gear if the normal operating mechanism fails.
 - o C: retract and extend the landing gear if the normal operating mechanism fails.

340: (Q340) In a hydraulic landing gear system, of which component does a sequence valve ensure proper timing?

- o A: landing gear doors.
- o B: main gear down locks.
- o C: main gear safety switches (proximity switches).

341: (Q341) Why must the nose wheel assembly be centered before retraction?

- o A: The tires may be damaged on landing if the nose wheel is not centered
- o B: The aircraft may swerve on the next landing if the nose wheel is not centered.
- o C: Damage to the gear or frame structure may occur if it is not centered.

342: (Q342) When the landing gear is locked up, the cockpit indicator shows ...

- o A: red light.
- o B: no indication.
- o C: green light.

343: (Q343) When the landing gear is selected up the sequence of lights is....

- o A: out, red, green.
- o B: green, red, out.
- o C: red, green, out.

344: (Q344) 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: have less weight than normal brake units and have increased efficiency at high temperatures.
- o C: weigh the same as normal brake units and fade away at high temperatures.

345: (Q345) Aquaplaning can be reduced by ...

- o A: lowering slats.
- o B: an anti-skid device.
- o C: increased flaring.

346: (Q346) In an anti-skid system ...

- o A: brakes release on falling torque.
- o B: brakes release on rising torque.
- o C: brakes are modulated to give most efficient braking.

347: (Q347) Why is a hydraulic damper fitted to a nose wheel steering system?

- o A: to reduce vibration and shimmy.
- o B: to centralise the nose wheel during an up selection.
- o C: To centralise the nose leg assembly during an up selection.

348: (Q348) What controls the nose wheel steering on a large modern aircraft?

- o A: A separate pilot operated control.
- o B: The control column.
- o C: Differential braking

349: (Q349) A nose wheel steering control system....

- o A: allows the nosewheel to caster freely at all times.

- o B: prevents the nosewheel from castering at all times.
 - o C: allows the nosewheel to caster within preset limits when in the neutral position.
- 350: (Q350) Inadvertent retraction of an electronically controlled landing gear on the ground is....
- o A: always a danger after the ground locks have been removed.
 - o B: prevented by the ground/air logic system.
 - o C: not possible because the system is not powerful enough.
- 351: (Q351) What is the advantage that stress sensors have over other air/ground sensing systems?
- o A: Can measure aircraft weight.
 - o B: Easier to replace.
 - o C: More reliable.
- 352: (Q352) On aircraft with bogie beams (trucks), what is used to detect air/ground?
- o A: Truck tilt switches.
 - o B: Squat switches.
 - o C: Weight-on-wheel switches.
- 353: (Q353) What is the result when the steel target is in close proximity to the proximity sensor?
- o A: A closed switch.
 - o B: An open switch.
 - o C: A failed switch.
- 354: (Q354) Cabin chemical oxygen generators are located in?
- o A: The overhead bins.
 - o B: The cargo hold.
 - o C: The passenger service units.
- 355: (Q355) Oxygen for the flight crew of commercial aircraft comes in which form?
- o A: Chemical oxygen generators.
 - o B: Gaseous oxygen.
 - o C: Liquid oxygen.
- 356: (Q356) What is the chemical used in chemical oxygen generators?
- o A: Sodium chlorate and iron
 - o B: Sodium hydroxide
 - o C: Ozone
- 357: (Q357) How does an 'on board oxygen generation system' (OBOGS) produce oxygen?
- o A: By using molecular filters.
 - o B: By using sodium chloride.
 - o C: By electrolysis of water.
- 358: (Q358) In which type of aircraft is liquid oxygen used?
- o A: Aircraft flying at very high altitudes.
 - o B: Military aircraft.
 - o C: Most large passenger aircraft.

359: (Q359) The pressure regulator on an oxygen demand system regulates the pressure to:

- o A: 70 PSI
- o B: 90 PSI
- o C: 400 PSI

360: (Q360) When the N/100% selector is placed in the 'N' position on a diluter demand regulator, what is the oxygen flow supplied?

- o A: 100% oxygen while the user is inhaling.
- o B: A mixture of oxygen and cabin air while the user is inhaling.
- o C: A mixture of oxygen and cabin air at a constant flow.

361: (Q361) Is it possible to regulate the amount of oxygen from a chemical oxygen generator?

- o A: Only the crew.
- o B: No.
- o C: Yes.

362: (Q362) A green disk on the side of the fuselage is missing, what does this indicate?

- o A: The maximum pressure in the oxygen cylinder has been exceeded.
- o B: The oxygen bottle pressure is below operational limits.
- o C: The maximum pressure in the oxygen supply lines has been exceeded.

363: (Q363) How can you see if a chemical oxygen generator has been expended?

- o A: By a pop-out indicator.
- o B: By a coloured band of thermal paint.
- o C: By a pressure indicator.

364: (Q364) Where can you find a direct reading pressure gauge on an oxygen system?

- o A: On the oxygen bottle.
- o B: On the flight deck.
- o C: On the oxygen system control panel.

365: (Q365) Which indication of a used chemical oxygen generator is provided?

- o A: No indication, only by weighing the oxygen generator the status can be determined.
- o B: The pressure indicator will be in the red zone.
- o C: A change of colour of a band of thermal paint around the case.

366: (Q366) What is the main advantage of using compressed air over hydraulics or electrical systems?

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

367: (Q367) 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.
- o 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.

368: (Q368) What type of air pump is commonly used in low pressure pneumatic systems?

- o A: Centrifugal pump.
- o B: Vane pump.
- o C: Piston pump.

369: (Q369) What is important about the air entering a dry air pump?

- o A: It must be pressure controlled.
- o B: It must be temperature controlled.
- o C: It must be filtered.

370: (Q370) What regulates the cooled air coming out of the pre-cooler?

- o A: The FAMV (Fan Air Modulating Valve).
- o B: The PRSOV (Pressure Regulating and shut-off Valve).
- o C: The HPSOV (High Pressure Shut-Off Valve).

371: (Q371) What happens if the pneumatic system bleed air is OFF, purposely or by failure?

- o A: the OFF light in the control switch illuminates and a warning 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.
- o C: a caution appears on the ECAM or EICAS screen.

372: (Q372) How is pneumatic leak detection done?

- o A: Thermal switches.
- o B: Thermocouples.
- o C: Pressure sensors.

373: (Q373) How are the gyroscopes in a pneumatic gyro instrument system on an aircraft at high altitude driven?

- o A: By bleed air pressure.
- o B: By ram air.
- o C: By air pump suction.

374: (Q374) An automatic pilot is a system which can ensure the functions of:

- o A: Navigation.
- o B: Piloting from take-off to landing without any action from the pilot.
- o C: Piloting and guidance of an aircraft in both the horizontal and vertical planes.

375: (Q375) On an autopilot coupled approach, GO AROUND mode is engaged:

- o A: If the aircraft reaches the decision height selected on the radio altimeter at a higher speed than the one selected.
- o B: By the pilot selecting G.A. mode on the flight mode control panel.
- o C: By the pilot pushing a button located on the throttles.

376: (Q376) A full operational autopilot system will ensure that

- o A: the automatic pilot will automatically cause the aircraft to overshoot if any failure is detected.
- o B: the aircraft will continue its automatic landing in the event of a single failure.
- o C: the automatic pilot will automatically disengage whenever any failure is detected.

377: (Q377) To carry out an autopilot check first

- o A: switch off all power.
- o B: switch on NAV receivers.
- o C: ensure all control surfaces are unobstructed.

378: (Q378) The definition of fail operational is the ability of a system to

- o A: disconnect but leave the aircraft out of trim.
- o B: continue to control after any first fault.
- o C: disconnect and leave the aircraft in trim.

379: (Q379) Flight director command bars indicate

- o A: Direction in which aircraft is flying.
- o B: Direction in which aircraft is to be manoeuvred.
- o C: Direction in which the beacon is.

380: (Q380) The command bars of a flight director are generally represented on an:

- o A: ADI (Attitude Director Indicator).
- o B: RMI (Radio Magnetic Indicator).
- o C: HSI (Horizontal Situation Indicator).

381: (Q381) The position of a Flight Director command bars:

- o A: only displays information relating to radio-electric deviation.
- o B: indicates the manoeuvres to execute, to achieve or maintain a flight situation.
- o C: enables the measurement of deviation from a given position.

382: (Q382) A single axis autopilot system provides....

- o A: control about the roll axis.
- o B: stabilisation about the normal axis.
- o C: control about the pitch axis.

383: (Q383) A single axis autopilot may also be called:

- o A: altitude hold.
- o B: auto stabilisation loop.
- o C: wing leveller.

384: (Q384) A three-axis auto pilot is....

- o A: an auto stabilisation system.
- o B: a system which will maintain a preselected altitude.
- o C: a system which will maintain a preselected airspeed.

385: (Q385) An automatic flight control system:

- o A: applies flight data to the auto pilot system.
- o B: can only be used in EFIS equipped aircraft.
- o C: is another name for an autopilot system.

386: (Q386) Autopilot disengagement is....

- o A: an aural warning only.
- o B: an aural warning and flashing light.

- o C: a caution light and an aural warning.
- 387: (Q387) An autopilot closed loop control....
- o A: is controlled by the AP mode control unit.
 - o B: has no feedback data.
 - o C: is for stabilisation only.
- 388: (Q388) Coordinated autopilot turns are achieved by
- o A: yaw rate gyro signals.
 - o B: aileron to elevator crossfeed.
 - o C: aileron to rudder crossfeed.
- 389: (Q389) The Altitude Select System:
- o A: Engages autopilot Auto Trim at selected altitude.
 - o B: Disengages autopilot Auto Trim at selected altitude.
 - o C: Is annunciated by light and/or sound when airplane is approaching selected altitude.
- 390: (Q390) The fundamental components of an autopilot control loop are:
- o A: rate gyro, servo motor, torque limiter.
 - o B: torque limiter, error signal generator, servomotor.
 - o C: rate gyro, servomotor, error signal generator.
- 391: (Q391) What controls in a closed loop system the flight control movement?
- o A: A rate gyro.
 - o B: A servomechanism.
 - o C: An amplifier.
- 392: (Q392) With the autopilot engaged in the ALT mode the Captain alters the barometric setting. The aircraft:
- o A: trips out of altitude hold.
 - o B: changes its altitude in accordance with the change in pressure setting.
 - o C: maintains its altitude.
- 393: (Q393) Which modes are incompatible?
- o A: HDG + V/S HOLD
 - o B: G/S + ALTITUDE HOLD
 - o C: VOR + ALTITUDE HOLD
- 394: (Q394) In the FMS vertical navigation (V NAV) climb mode the throttles are used for
- o A: controlling to a maximum thrust.
 - o B: maintaining a computed EPR.
 - o C: correction minor speed deviations.
- 395: (Q395) The GA mode is usually initiated by....
- o A: pressing a button on the autopilot control panel.
 - o B: making a selection on the mode control panel.
 - o C: pressing a button on thrust levers.

396: (Q396) Overshoot or go-around mode can be initiated

- o A: at any time.
- o B: at any time after autoland has been engaged.
- o C: only when the auto-approach mode is activated.

397: (Q397) If go-around has been initiated after auto-land has been selected, the aeroplane will

- o A: increase speed.
- o B: rotate nose up.
- o C: increase speed and rotate nose up.

398: (Q398) The two parameters used for category aircraft classification are....

- o A: localiser and glideslope.
- o B: decision height and runway visual range.
- o C: radio height/runway visual range.

399: (Q399) What is the controlling factor in the automatic flare mode?

- o A: Decision height.
- o B: Localizer signal.
- o C: Radio altimeter.

400: (Q400) With airspeed hold engaged, Flight Director engaged, a down command means your speed....

- o A: has decreased.
- o B: keeps the same.
- o C: has increased.

401: (Q401) On aircraft an auto land during auto flare the auto throttle will

- o A: retard the throttle.
- o B: reverse thrust.
- o C: control throttle for a IAS.

402: (Q402) During approach, roll out mode occurs....

- o A: after flare.
- o B: at alert height.
- o C: before flare.

403: (Q403) When being engaged, and without selecting a particular mode, an automatic pilot enables....

- o A: all aeroplane piloting and guidance functions except maintaining radio-navigation course lines.
- o B: aeroplane stabilisation with attitude hold.
- o C: a constant speed on track, wings horizontal.

404: (Q404) Automatic flight systems may be capable of controlling the aircraft flight in:

- o A: azimuth and elevation only.
- o B: azimuth, elevation and velocity.
- o C: azimuth and velocity only.

405: (Q405) An automatic flight control system is fitted with control wheel steering (CWS)

o A: manoeuvring commands may be input by applying normal force to the control yoke without first disengaging the autopilot.

o B: the autopilot must be disengaged before the pilot can input manoeuvring commands.

o C: the CWS is only there for steering on the ground.

406: (Q406) Inputs to the rudder channels initially originate from

o A: compass gyro and turn and slip gyro.

o B: servomotors.

o C: AH (altitude hold) gyro and turn and slip gyro.

407: (Q407) Which airplane behavior will be corrected by a yaw damper?

o A: Dutch roll.

o B: Spiral dive.

o C: Tuck under.

408: (Q408) The purpose of a yaw damper is to

o A: assist the aerodynamic response.

o B: produce a coordinated turn.

o C: block the Dutch roll frequency.

409: (Q409) When the aircraft nose yaws to the left, the yaw damper will apply corrective rudder to

o A: the right.

o B: the left with some aileron assistance.

o C: the left.

410: (Q410) A yaw damper will apply rudder proportional to

o A: amount of aircraft disturbance.

o B: attitude of aircraft.

o C: rate of yaw.

411: (Q411) An aircraft has yaw damping included in its auto stabilisation system. An essential requirement of such system is:

o A: INS inputs to the CADC.

o B: a three axis autopilot system.

o C: series connected servo motors.

412: (Q412) A triplex system loses one channel, the pilot....

o A: must make a full manual approach and land.

o B: can continue with autoland.

o C: can use auto approach only.

413: (Q413) A Stability Augmentation System (SAS) is a rate damping system that will:

o A: Stop unwanted rate of motion from developing.

o B: Gives good control and handling characteristics.

o C: All of the answers.

414: (Q414) A dual-dual stability augmentation system:

o A: disengages when a failure occurs and the system reverts to manual control.

- o B: ensures that a lane failure results in that the actuators remains at their position when the failure occurred.

- o C: can survive the first failure and reverts to manual control in the event of a second failure.

415: (Q415) A duplex SAS (Stability Augmentation System) architecture ensures that a lane failure results in....

- o A: only a passive failure, that is, the output of the two lane actuators remains at the position it was in at the time of failure.

- o B: a passive failure with the system reverting to manual operation.

- o C: a setting which limits the movement of the two lane actuators.

416: (Q416) Automatic trim is used to....

- o A: prevent loads on the elevator trims.

- o B: allow full authority to be regained by the aileron.

- o C: maintain level flight.

417: (Q417) The purpose of Automatic Trim function in autopilot is to....

- o A: control elevator trim tab in order to relieve elevator load.

- o B: trim throttles to obtain smooth engine power variation.

- o C: tell the pilot when elevator trimming is required.

418: (Q418) In the automatic trim control system of an autopilot, automatic trimming is normally effected about the :

- o A: pitch and roll axes only.

- o B: pitch axis only.

- o C: pitch, roll and yaw axes.

419: (Q419) The purpose of an airplane automatic trim system is to trim out the hinge moment of the :

- o A: elevator(s), rudder(s) and ailerons.

- o B: elevator(s).

- o C: elevator(s) and rudder(s).

420: (Q420) Automatic mach trim is functional in the....

- o A: pitch and roll channel with the autopilot engaged.

- o B: pitch channel only with the autopilot engaged.

- o C: pitch channel only with the autopilot disengaged.

421: (Q421) An automatic pitch trim system employs a separate pitch trim servomotor which operates....

- o A: in parallel with the autopilot pitch control servo.

- o B: in series with the autopilot pitch control servo.

- o C: as a stand-alone system.

422: (Q422) Automatic steering of the aircraft after touch down is affected by

- o A: the area navigation system.

- o B: the runway localiser.

- o C: the airfield marker beacon.

- 423: (Q423) The flare manoeuvre may be controlled by signals from
- o A: the glide slope receiver.
 - o B: radio altimeter.
 - o C: the localiser receiver.
- 424: (Q424) When the bank angle limit is applied to the autopilot , it means
- o A: maximum rudder deflection.
 - o B: the max aileron angle that can be commanded.
 - o C: the max roll angle that can be demanded by the autopilot.
- 425: (Q425) When the altitude select mode is engaged on a jet transport airplane equipped with autopilot (AP) and auto-throttle (ATS) systems the...
- o A: indicated airspeed (IAS) is maintained constant by the autopilot by means of elevator.
 - o B: true airspeed (TAS) is maintained constant by the auto-throttle system.
 - o C: calibrated airspeed (CAS) is maintained constant by the autopilot by means of elevator.
- 426: (Q426) Mode 'Localizer ARM' active on Flight Director means:
- o A: System is armed for localizer approach and coupling will occur upon capturing center line.
 - o B: Localizer is armed and coupling will occur when flag warning disappears.
 - o C: Coupling has occurred and system provides control data to capture the centerline.
- 427: (Q427) The application of normal forces on the control column with the autopilot engaged is called....
- o A: control wheel steering.
 - o B: parallel connected system.
 - o C: touch control steering.
- 428: (Q428) Central Air Data Computers (CADC's) transmit data concerning
- o A: airspeed, altitude and Mach number.
 - o B: airspeed and altitude only.
 - o C: airspeed, altitude and decision height.
- 429: (Q429) LNAV is an ...(1)..... input to the.....(2)..... channel using data from the ...(3).....
- o A: (1) outer loop - (2) pitch - (3) FMC
 - o B: (1) outer loop - (2) roll - (3) FMC
 - o C: (1) inner loop - (2) pitch - (3) ADC
- 430: (Q430) The flight director is displayed on the....
- o A: EADI
 - o B: bearing indicator
 - o C: EHSI
- 431: (Q431) The take-off of an aircraft is....
- o A: flown automatically.
 - o B: not possible with go-around (GA) set on the trust mode control panel (TMCP).
 - o C: flown manually.
- 432: (Q432) The fixed trim tab....

- o A: is manually controlled from the cockpit.
- o B: is riveted to the leading edge.
- o C: is adjusted by bending.

433: (Q433) Auto-throttle engaged mode can be checked by the pilot, using:

- o A: position of throttles.
- o B: primary flight display.
- o C: thrust control computer.

434: (Q434) The auto throttle system is: 1. able to catch and maintain the N1 RPM. 2. able to catch and maintain the N2 RPM. 3. able to catch and maintain an airplane indicated airspeed IAS. 4. always engaged automatically at the same time as the autopilot. The combination regrouping all the correct statements is:

- o A: 1 and 4.
- o B: 2 and 3.
- o C: 1 and 3.

435: (Q435) At the missed approach point the TOGA switch on the throttles is depressed. Which of the following statements are correct: 1. Pilot selects maximum power. 2. Auto-throttle selects GA power. 3. Aircraft automatically cleans up. 4. Auto-pilot flies the GA. 5. Pilot flies the GA manoeuvre. The combination regrouping all the correct statements is:

- o A: 1 and 4
- o B: 1 and 5
- o C: 2 and 4

436: (Q436) The autothrottle maintains a specific value of thrust in terms of:

- o A: EPR, N1, Mach and airspeed.
- o B: N1, Mach and airspeed.
- o C: N2, Mach and airspeed.

437: (Q437) Auto throttle can hold: 1. speed. 2. flight path. 3. altitude. 4. Mach. 5. EPR / N1. 6. Attitude. The combination regrouping all the correct statements is:

- o A: 1, 4 and 5.
- o B: 1, 2, 3 and 4.
- o C: 1, 2 and 6.

438: (Q438) An automatic throttle, engaged in the EPR mode, will control

- o A: the aircraft altitude to maintain constant engine input pressure.
- o B: the engine throttles to maintain a constant acceleration rate.
- o C: the engine throttles to maintain a constant engine power setting.

439: (Q439) With autothrottle selected in the SPEED MODE compatible autopilot modes are

- o A: VOR ARM and HDG HOLD.
- o B: V/S and ALT ARM.
- o C: IAS HOLD and ALT ARM.

440: (Q440) When can the FMS be engaged with the autothrottle?

- o A: With either the Flight Director or the Digital Control System (DFCS) engaged.

- o B: only after take off.
- o C: only with the Flight Director selected.

441: (Q441) During flare mode autothrottle will

- o A: disconnect autothrottle.
- o B: retard throttles to idle.
- o C: select reverse thrust.

442: (Q442) If during take off (auto throttle engaged) the auto throttle fails, then....

- o A: Auto pilot disengages.
- o B: Status light illuminates.
- o C: Throttle hold is annunciated.

443: (Q443) When GA is initiated?

- o A: Auto throttle remains engaged giving correct G/A thrust.
- o B: Auto throttle disengages at 2000 ft/min rate and wings will level.
- o C: Auto throttle remains engaged allowing pilot to control the throttles.

444: (Q444) During the flair mode the A/T throttle will

- o A: select reverse thrust.
- o B: disconnect autothrottle.
- o C: retard throttle to idle.

445: (Q445) The purpose of Auto Throttle is:

- o A: automatic shut down of one engine at too high temperature.
- o B: to deactivate manual throttles and transfer engine control to Auto Pilot
- o C: to maintain constant engine power or airplane speed.

446: (Q446) In order to know in which mode the autothrottles are engaged, the crew will check the:

- o A: PFD (Primary Flight Display).
- o B: throttles position.
- o C: ND (Navigation Display).

447: (Q447) On an autopilot coupled approach, GO AROUND mode is engaged:

- o A: If the aircraft reaches the decision height selected on the radio altimeter at a higher speed than the one selected.
- o B: By the pilot selecting G.A. mode on the thrust computer control panel.
- o C: By the pilot pushing a button located on the throttles.

448: (Q448) When an automatic landing is interrupted by a go-around: 1. The auto throttle reacts immediately upon the pilot action on TO/GA switch in order to recover the maximum thrust. 2. The autopilot monitors the climb and rotation of the airplane. 3. The autopilot retracts the landing gear and reduces the flap deflection in order to reduce the drag. 4. The pilot performs the climb and the rotation of the airplane. 5. The pilot retracts the landing gear and reduces the flap deflection in order to reduce the drag. The combination regrouping all the correct statements is:

- o A: 1, 2, 5.
- o B: 1, 2, 3.
- o C: 1, 3, 4.

- 449: (Q449) During an automatic landing, the aircraft descent rate is sensed by
- o A: vertical accelerometers.
 - o B: radio altimeters.
 - o C: pitch rate gyros.
- 450: (Q450) Overshoot or go-around mode can be initiated....
- o A: at any time.
 - o B: only when autopilot is engaged.
 - o C: below 2000 feet radio altitude.
- 451: (Q451) In a duplex system, the detection of a failure of one simplex system will disconnect....
- o A: all channels.
 - o B: the failed system and carry on with an autoland.
 - o C: the failed system and continue in a trimmed safe attitude.
- 452: (Q452) Which is the correct sequence for an autoland?
- o A: Glideslope capture, altitude hold and flare.
 - o B: Localiser capture, glideslope capture, flare and attitude hold.
 - o C: Localiser capture, glideslope capture, attitude hold and flare.
- 453: (Q453) Before an aeroplane is able to make an automatic landing the
- o A: ground radio aids must be at least CAT I.
 - o B: ILS system must be working.
 - o C: ground radio aids must be at CAT II.
- 454: (Q454) If during autoland the LOC signal is lost at 400 ft in final approach
- o A: autoland is continued.
 - o B: go-around is initiated.
 - o C: system degrade to CAT II.
- 455: (Q455) The order of autoland approach is
- o A: GS, LOC, ATT HOLD, FLARE
 - o B: LOC, GS, FLARE, ATT HOLD
 - o C: LOC, GS, ATT HOLD, FLARE
- 456: (Q456) Purpose of an autoland decrabbing manoeuvre is to
- o A: assist with glide slope tracking.
 - o B: point the aircraft down the runway at touch down.
 - o C: assist with localiser tracking.
- 457: (Q457) Until touchdown, auto pilot, with auto-land system....
- o A: disconnects after a short time.
 - o B: drives the throttles forward.
 - o C: remains engaged ready for G/A.
- 458: (Q458) If a fault is detected during an autoland approach the system will totally disconnect if it is a
- o A: Duplex system.

- o B: Triplex system.
- o C: Simplex system.

459: (Q459) An aircraft will capture the auto land system at

- o A: 1500 ft.
- o B: 3500 ft.
- o C: 2500 ft.

460: (Q460) In an Autoland, autothrottle is disengaged

- o A: manually after landing.
- o B: after reverse thrust is applied.
- o C: after a fixed period of the time after landing.

461: (Q461) During autoland all autopilot channels will disconnect in....

- o A: triplex system.
- o B: duplex system.
- o C: dual-dual system.

462: (Q462) In triplex autoland system failure of one channel will

- o A: disconnect the failure channel and continue with a manual approach.
- o B: disconnect all channels.
- o C: disconnect the failure channel and continue autoland approach.

463: (Q463) A landing will be considered to be performed in the AUTOMATIC mode when: 1. the autopilot maintains the airplane on the ILS beam until the decision height is reached then is disengaged automatically. 2. the auto throttle maintains a constant speed until the decision height is reached then is disengaged automatically. 3. the autopilot maintains the airplane on the ILS beam until the flare. 4. the auto throttle decreases the thrust when the height is approximately 30 ft. 5. the flare and the ground roll are performed automatically. The combination regrouping all the correct statements is:

- o A: 1 and 4.
- o B: 2, 3 and 5.
- o C: 3, 4 and 5.

464: (Q464) During a Category II automatic approach, the height information is supplied by the:

- o A: altimeter.
- o B: radio altimeter.
- o C: encoding altimeter.

465: (Q465) During a CAT 2 ILS automatic approach, the source for altitude information is the

- o A: radar altimeter which becomes effective below about 2500 feet.
- o B: basic altitude capsule stack.
- o C: mode comparator sensor.

466: (Q466) With localizer capture, the EFIS indication is VOR/LOC in....

- o A: white letters.
- o B: green letters.
- o C: amber letters.

467: (Q467) Secondary Surveillance Radar is a form of .(1)..radar with .(2)..type emissions operating in the .(3)..band.

- o A: (1) secondary - (2) pulse - (3) UHF
- o B: (1) secondary - (2) FM - (3) SHF
- o C: (1) primary - (2) pulse - (3) SHF

468: (Q468) The ATC altitude information is relative to....

- o A: 29.92 bar level.
- o B: 1013.2 mbar level.
- o C: 10.92 mbar level.

469: (Q469) The special 'Ident' feature (SPI-code)....

- o A: is to confirm SELCAL identity.
- o B: is to confirm TCAS identity.
- o C: allows ATC to confirm aircraft identity.

470: (Q470) What is the correct response to a TCAS RA?

- o A: Pilots have to follow ATC instructions as these override TCAS RA's.
- o B: Pilots follow the climb or descent commands smoothly and immediately.
- o C: Pilots turn 90° and they follow the climb or descent commands smoothly and immediately.

471: (Q471) On a TCAS2 (Traffic Collision Avoidance System) the preventive 'resolution advisory' (RA)....

- o A: advises the pilot to modify effectively the vertical speed of his aircraft.
- o B: advises the pilot to modify the speed of his aircraft.
- o C: suggests action to be taken to avoid a conflict.

472: (Q472) TCAS 2 (Traffic Collision Avoidance System) uses for its operation:

- o A: only the echoes from the ground air traffic control radar system.
- o B: both the replies from the transponders of other aircraft and the ground-based radar echoes.
- o C: only the replies from the transponders of other aircraft.

473: (Q473) A 'resolution advisory' (RA) is represented on the display system of the TCAS 2 (Traffic Collision Avoidance System) by a....

- o A: solid red square.
- o B: blue or white full lozenge.
- o C: red full circle.

474: (Q474) The principle of the TCAS (Traffic Collision Avoidance Systems) is based on the use of :

- o A: airborne weather radar system.
- o B: transponders fitted in the aircraft.
- o C: air traffic control radar systems.

475: (Q475) A 'TCAS II' (Traffic Collision Avoidance System) provides:

- o A: the intruder relative position and possibly an indication of a collision avoidance manoeuvre within the horizontal plane only.
- o B: a simple intruding airplane proximity warning..

o C: the intruder relative position and possibly an indication of a collision avoidance manoeuvre within the vertical plane only.

476: (Q476) On a TCAS 2 (Traffic Collision Avoidance System) the preventive 'resolution advisory' (RA) is a 'resolution advisory':

o A: that advises the pilot to avoid certain deviations from the current vertical rate but does not require any change to be made to that rate.

o B: asking the pilot to modify effectively the vertical speed of his aircraft.

o C: asking the pilot to modify the heading of his aircraft.

477: (Q477) The TCAS (Traffic Collision Avoidance System) is a proximity alarm system which detects a 'traffic' when the conflicting traffic is equipped with a:

o A: SELCAL system.

o B: DME system.

o C: serviceable mode S or SSR transponder.

478: (Q478) The TCAS 2 (Traffic Collision Avoidance System) provides: 1. traffic information (TA: Traffic Advisory) 2. horizontal resolution (RA: Resolution Advisory) 3. vertical resolution (RA: Resolution Advisory) 4. ground proximity warning The combination regrouping all the correct statements is:

o A: 1 and 2

o B: 1, 2, 3 and 4.

o C: 1 and 3

479: (Q479) A mode C transponder

o A: can be used for TCAS II.

o B: cannot be used for TCAS II.

o C: can be used for TCAS on ILS approach only.

480: (Q480) Weather Radar returns show areas of precipitation in the following colors:

o A: Green, Yellow, Red and Magenta.

o B: Green, Magenta, Blue and Red.

o C: Green, Orange, Yellow and Red.

481: (Q481) Weather radar domes are protected from lightning strikes by

o A: special conducting or non-conducting grease.

o B: bonding strips.

o C: the use of special conductive paint.

482: (Q482) What does the Radar contour button do?

o A: Alter the transmitter power.

o B: Alter the display presentation.

o C: Alter the video amplifier.

483: (Q483) A frequency used by airborne weather radar is:

o A: 1213 MHz.

o B: 9.375 GHz.

o C: 8800 MHz.

484: (Q484) Airborne Weather Radar is an example of..... radar operating on a frequency of..... in the.....band.

- o A: secondary - 9375 MHz - SHF
- o B: secondary - 9.375 MHz - UHF
- o C: primary - 9375 MHz - SHF

485: (Q485) A false indication of water may be given by the AWR display when:

- o A: there is cloud and precipitation between the aircraft and a cloud target.
- o B: flying over land with the Land/Sea switch in the Sea position.
- o C: flying over mountainous terrain.

486: (Q486) The antenna of an airborne weather radar is stabilised....

- o A: in attitude in relation to the vertical plane.
- o B: in pitch only, when 0o tilt is selected.
- o C: in attitude in relation to the horizontal plane.

487: (Q487) A radio altimeter can be defined as a....

- o A: self-contained on-board aid used to calculate the barometric altitude of the aircraft.
- o B: ground radio aid used to measure the true altitude of the aircraft.
- o C: self-contained on-board aid used to measure the true height of the aircraft.

488: (Q488) Modern low altitude radio altimeters emit waves in the following frequency band:

- o A: SHF (Super High Frequency).
- o B: UHF (Ultra High Frequency).
- o C: HF (High Frequency).

489: (Q489) During the approach, a crew reads on the radio altimeter the value of 650ft. This is an indication of the true height of the....

- o A: aircraft with regard to the runway.
- o B: lowest wheels with regard to the ground at any time.
- o C: aircraft with regard to the ground at a given barometric pressure.

490: (Q490) For most radio altimeters, when a system error occurs during approach the

- o A: DH lamp flashes red and the audio signal sounds.
- o B: DH lamp flashes red.
- o C: Height indication is removed.

491: (Q491) The data supplied by a radio altimeter:

- o A: is used only by the radio altimeter indicator.
- o B: is used by the automatic pilot in the altitude hold mode.
- o C: indicates the distance between the ground and the aircraft.

492: (Q492) The aircraft radio equipment which emits on a frequency of 4400 MHz is the:

- o A: radio altimeter.
- o B: weather radar.
- o C: primary radar.

493: (Q493) A Radar altimeter system measures altitude....

- o A: in relation to sea level.
- o B: in combination with GPS-satellites
- o C: above terrain.

494: (Q494) What does the term AIR-GROUND COMMUNICATION mean?

- o A: Any communication from aircraft to ground station requiring handling by the Aeronautical Fixed Telecommunication Network (AFTN).
- o B: One-way communication from stations or locations on the surface of the earth.
- o C: Two-way communication between aircraft and stations or locations on the surface of the earth.

495: (Q495) The ADS-B (Automatic Dependent Surveillance Broadcast) digitises the position information derived from....and broadcasts it as part of a data stream.

- o A: INS or IRS.
- o B: GNSS.
- o C: R-NAV system.

496: (Q496) ADS-B: 1. broadcasts information about aircraft, such as identification, current position, altitude and velocity. 2. provides air traffic controllers with real-time position information. 3. receives Flight Information data. 4. receives Traffic Information Service data. 5. receives other ADS-B Out broadcasting aircraft.

- o A: 2, 4 and 5
- o B: 1, 3 and 5.
- o C: 1, 2, 3, 4 and 5.

497: (Q497) What is the Speed of an ARINC 429 system?

- o A: 2.3 - 23 Mbits/s
- o B: 2 - 6 Gbits/s.
- o C: 100 kbits/s

498: (Q498) An ARINC 429 binary coded decimal data word occupies bits

- o A: 11 to 29
- o B: 11 to 28
- o C: 1 to 8

499: (Q499) An ARINC 429 bus uses

- o A: two bi-directional twin sheathed and earthed wires.
- o B: a single tin wire cable for each transmitter.
- o C: a twisted shielded pair of wires.

500: (Q500) ARINC 629 current mode couplers are

- o A: resistive.
- o B: inductive.
- o C: capacitive.

501: (Q501) ARINC 629 data bus is

- o A: two buses, bi-directional data flow.
- o B: two buses, unidirectional.

- o C: one bus, bi-directional data flow.
- 502: (Q502) In an ARINC 429 wordstring, bits 1 to 8 represent the
- o A: destination LRU address.
 - o B: source of message.
 - o C: information contained in the data word.
- 503: (Q503) ARINC 429 SDI word format is at bits
- o A: 31 - 32
 - o B: 1 - 8
 - o C: 9 - 10
- 504: (Q504) ACARS messages are sent from the aircraft via:
- o A: an UHF communication transceiver.
 - o B: GNSS.
 - o C: a VHF communication transceiver.
- 505: (Q505) The continuous broadcast of recorded non-control information in busier terminal areas (i.e. Airport) is called
- o A: ACARS
 - o B: SITA
 - o C: ATIS
- 506: (Q506) MLS installations notified for operation, unless otherwise stated, provide azimuth coverage of....
- o A: +or - 40° about the nominal course line out to a range of 20 NM.
 - o B: +or - 20° about the nominal course line out to a range of 30 NM.
 - o C: +or - 20° about the nominal course line out to a range of 20 NM.
- 507: (Q507) Which one of the following methods is used by a Microwave Landing System (MLS) to indicate distance from the runway threshold?
- o A: A DME co-located with the MLS transmitters.
 - o B: Measurement of the frequency shift between the MLS azimuth and elevation transmissions.
 - o C: Timing the interval between the reception of sequential secondary radar pulses from the MLS station to the aircraft.
- 508: (Q508) Which one of the following correctly lists the major ground based components of a Microwave Landing System (MLS)?
- o A: Separate azimuth and elevation transmitters, outer and middle marker beacons.
 - o B: Combined azimuth and elevation transmitter, marker beacons.
 - o C: Separate azimuth and elevation transmitters, DME facility.
- 509: (Q509) Which one of the following is an advantage of a Microwave Landing System (MLS) compared with an Instrument Landing System (ILS)?
- o A: The installation does not require to have a separate method (marker beacons or DME) to determine range.
 - o B: It is insensitive to geographical site and can be installed at sites where it is not possible to use an ILS.

o C: There is no restriction on the number of ground installations that can be operated because there is an unlimited number of frequency channels available.

510: (Q510) In which frequency band does the Microwave Landing System (MLS) operate?

- o A: SHF
- o B: VHF
- o C: UHF

511: (Q511) A hyperbola is a line joining all points where the difference....

- o A: in time between two fixed points is different.
- o B: of distance between two lines is different.
- o C: of distance between two fixed points is the same.

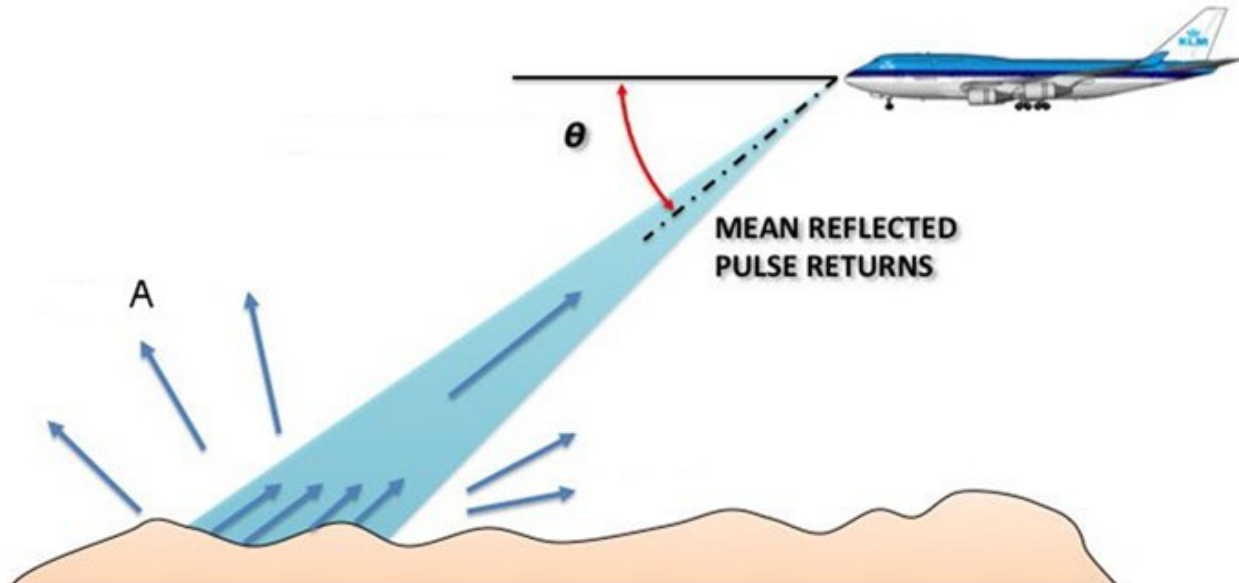
512: (Q512) Hyperbolic navigation systems determine present position from the intersection of....

- o A: longitudinal magnetic field lines.
- o B: GPS satellite intersection.
- o C: lines of position.

513: (Q513) Hyperbolic propagation errors are....

- o A: the greatest above water.
- o B: the greatest above land.
- o C: not present in this type of navigation.

514: (Q514) How do you call the waves depicted in the figure with an A?



- o A: Scattered waves.
- o B: Depression waves.
- o C: Deflected waves.

515: (Q515) What is the difference between VOR and hyperbolic navigation?

- o A: VOR has straight lines and hyperbolic navigation lines are curved.
- o B: Hyperbolic has straight radial lines and VOR navigation lines are curved.

- o C: There is no difference between VOR and Hyperbolic navigation.
- 516: (Q516) The best fix for hyperbolic navigation is when the lines of position (LOP) intersect....
- o A: in a diagonal angle.
 - o B: at an angle of 90o.
 - o C: at the greatest curve.
- 517: (Q517) Doppler operates on the principle that .(1)..between a transmitter and receiver will cause the received frequency to .(2)..if the transmitter and receiver are moving .(3)..
- o A: (1) relative motion - (2) decrease - (3) apart.
 - o B: (1) the distance - (2) increase - (3) at the same speed.
 - o C: (1) apparent moving - (2) decrease - (3) together.
- 518: (Q518) Due to 'Doppler' effect an apparent decrease in the transmitted frequency, which is proportional to the transmitter's velocity, will occur when the transmitter....
- o A: moves toward the receiver.
 - o B: moves away from the receiver.
 - o C: and receiver move towards each other.
- 519: (Q519) The Doppler Navigation System is based on....
- o A: radar principles using frequency shift.
 - o B: pulse shift transmission.
 - o C: radio waves refraction in the ionosphere.
- 520: (Q520) Exit signs must have ...
- o A: red letters on a white electrically or self illuminated background.
 - o B: white electrically or self illuminated letters on a black background.
 - o C: black letters on a white electrically or self illuminated background.
- 521: (Q521) Emergency lightning can be illuminated by....
- o A: a guarded three position switch (ON-OFF-ARMED) in the cabin and a Two position switch in the cockpit (ON-NORMAL).
 - o B: a guarded three position switch (ON-OFF-ARMED) in the cockpit and a Two position switch in the cabin (ON-NORMAL).
 - o C: automatically when power is removed from the aircraft (in an emergency or by the pilots).
- 522: (Q522) The capacity of the emergency batteries are capable of providing emergency lighting for a period of at least ...
- o A: 10 minutes.
 - o B: 1 hour.
 - o C: 1 minute.
- 523: (Q523) An aircraft with two passenger decks with more than 100 seats per deck is equipped with....
- o A: 1 megaphone.
 - o B: 3 megaphones.
 - o C: 4 megaphones.
- 524: (Q524) Which system do you have to use if you want listen music in an aircraft?

o A: the ADF (Automatic Direction Finder) to the frequency of a local commercial AM radio station and then figure out how to couple it to the aircraft PA system.

o B: the VHF radio to the frequency of a local commercial FM radio station and then figure out how to couple it to the aircraft PA system.

o C: the VOR (VHF Omni Range) to the frequency of a local commercial FM radio station and then figure out how to couple it to the aircraft PA system.

525: (Q525) The PA amplifier sets the priority for the audio inputs. Which has the highest priority?

o A: Announcement from the flight compartment.

o B: Boarding Music.

o C: Announcement from an attendant.

526: (Q526) Which priority do announcements from the flight deck have?

o A: Priority 2.

o B: Priority 1.

o C: Priority 5.

527: (Q527) The means of interacting with cabin management computers may involve using remote control devices. What do these remote devices use for communication?

o A: VLF.

o B: Ethernet.

o C: Either infrared (IR) or radio frequency (RF).

528: (Q528) How are the IFES (In-Flight Entertainment System) Ethernet network set of units connected?

o A: Infrared wires.

o B: Glass fiber connection.

o C: Twisted pair wires.

529: (Q529) How is communication from the In Flight Entertainment System to a ground station achieved?

o A: Automatic Terminal Information System (ATIS).

o B: Selective Calling System (SELCAL).

o C: Aircraft Communications Addressing and Reporting System (ACARS).

530: (Q530) How does the IFES (In-Flight Entertainment System) send audio and video signals?

o A: Fibre optics.

o B: A standard 100 Mbit/s fast Ethernet LAN.

o C: A standard 1 Gbit/s fast Ethernet LAN.

531: (Q531) How can adverse yaw when rolling about the longitudinal axis may be prevented?

o A: A smaller fin.

o B: Differential ailerons.

o C: Equal deflection lateral control surfaces.

532: (Q532) In a Frise aileron control system....

o A: the down-going aileron leading edge protrudes into the airflow.

o B: the up-going aileron moves through a greater angle than the down going aileron.

o C: the up-going aileron produces increased drag.

533: (Q533) When an aircraft fitted with spoilers is rolled to the left, what is the movement of those spoilers?

- o A: Left spoiler is deflected up and the right down.
- o B: Right spoiler is deflected down.
- o C: Left spoiler is deflected up.

534: (Q534) Anti-servo tabs....

- o A: are directly connected to the control column.
- o B: move in the same direction as the control surface.
- o C: move in the opposite direction to the control surface.

535: (Q535) What happens when you move the aileron control to the right?

- o A: the right elevator goes up and the left down.
- o B: the right aileron moves up and the left down.
- o C: the right aileron moves down and the left up.

536: (Q536) What must you do to yaw the aircraft to the right?

- o A: The right rudder pedal is pushed forward and the rudder moves to the right.
- o B: The left rudder pedal is pushed forward and the rudder moves to the left.
- o C: The right rudder pedal is pushed forward and the rudder moves to the left.

537: (Q537) What is the fundamental difference between a trim tab and a servo tab?

- o A: The purpose of a trim tab is to reduce continuous stick force to zero, a servo tab only reduces stickforce.
- o B: The functioning of a trim tab is based on aerodynamic balancing, a servo tab in general is adjusted via a screw jack.
- o C: A trim tab is automatically adjusted when the particular control surface moves, a servo tab is moved independently of the particular control surface.

538: (Q538) Aircraft flight control trim systems must be designed and installed so that the....

- o A: operating control and the trim tab will always move in the same direction.
- o B: pilot can determine the relative position of the trimtab from the cockpit.
- o C: trim system will disengage or become inoperative if the primary flight control system fails.

539: (Q539) The purpose of a trim tab (device) is to....

- o A: reduce or to cancel control forces.
- o B: trim the airplane at low airspeed.
- o C: to assist in steering commands.

540: (Q540) Active load control involves....

- o A: operating control surfaces in an unconventional manner.
- o B: intervention & monitoring the human pilot.
- o C: limiting the deflection of control surface with airspeed.

541: (Q541) Which control surfaces may be used by active load control?

- o A: Elevator and aileron.
- o B: Aileron and spoiler.

o C: Elevator and stab.

542: (Q542) Where are the gust suppression pressure transducers located? On both sides of....

o A: the vertical stabilizer to measure the pressure differences between the sides of the tail.

o B: the horizontal stabilizer to measure the pressure differences between the bottom and top side of the stabilizer.

o C: the aircraft (nose and tail) to measure the pressure differences between the nose and tail (slip).

543: (Q543) Make the best choice: The employment of active control technology presents numerous advantages, namely: 1. more stable aircraft. 2. more comfortable flight. 3. better fuel consumption. 4. possible to fly the aircraft beyond its design limitations.

o A: 1, 2 and 4.

o B: 2, 3 and 4.

o C: 1, 2 and 3.

544: (Q544) What will an extended fowler flap increase?

o A: Wing area.

o B: Wing area and aspect ratio.

o C: Wing area and camber.

545: (Q545) The type of flap that extends rearward from the trailing edge as it is lowered is....

o A: a Kreuger flap.

o B: a Fowler flap.

o C: a Zap flap.

546: (Q546) A Fowler flap....

o A: does not change the wing area.

o B: increases wing area.

o C: decreases wing area.

547: (Q547) Spoilers are speed brakes. Where can other speed brakes be located?

o A: Rear of the Fuselage.

o B: On the wing.

o C: Under the Fuselage.

548: (Q548) Which device is used to dump lift?

o A: spoiler.

o B: trailing edge flaps.

o C: leading edge flaps.

549: (Q549) In a turn, wing spoilers may be deployed....

o A: in unison with both the up going and down going ailerons.

o B: to act as an airbrake, interacting with the ailerons.

o C: to assist the up going aileron.

550: (Q550) What are ground spoilers used for?

o A: To dump lift.

o B: To assist the aircraft when go around is selected on ground.

o C: For steering commands while taxiing.

551: (Q551) In which control system will an artificial feel system be required?

- o A: Aerodynamically controlled system.
- o B: Power assisted control system.
- o C: Power operated control system.

552: (Q552) In a direct cable control system, what happens to the forces the pilot feels if airspeed increases?

- o A: Increase.
- o B: Remain the same.
- o C: Decrease.

553: (Q553) An artificial feel system is required for....

- o A: power operated control systems.
- o B: power assisted control systems.
- o C: direct cable systems.

554: (Q554) A yaw damper is....

- o A: an elevator augments to avoid nose-down effect at speeds greater than $M = 0.8$.
- o B: a rudder damper designed to avoid the "dutch roll".
- o C: an elevator augments.

555: (Q555) What eliminates Dutch roll?

- o A: The yaw damper.
- o B: The differential ailerons.
- o C: The Dutch Roll damper.

556: (Q556) How can flutter be reduced?

- o A: A horn balance.
- o B: Servo tabs.
- o C: Mass balancing.

557: (Q557) When does a stick-shaker come into operation? When the aircraft....

- o A: goes supersonic.
- o B: is approaching a stall.
- o C: is approaching the 'critical mach number'.

558: (Q558) What is the effect of a single failure of a fly-by-wire system?

- o A: It will limit the flight profile.
- o B: It has no effect on the aircraft's operation.
- o C: It will reduce the operational height and speed.

559: (Q559) The advantages of fly-by-wire control are: 1. reduction of the electric and hydraulic power required to operate the control surfaces 2. lesser sensitivity to lightning strike 3. direct and indirect weight saving through simplification of systems 4. immunity to different interfering signals 5. improvement of piloting quality throughout the flight envelope The combination regrouping all the correct statements is:

- o A: 2 and 3
- o B: 1, 4 and 5
- o C: 3 and 5

560: (Q560) Which of the following instruments are navigation instruments? 1. air speed indicator.
2. altimeter. 3. gyro horizon. 4. global navigation satellite system. 5. Inertial reference system.

- o A: 1, 2 and 3.
- o B: 3, 4 and 5.
- o C: 4 and 5.

561: (Q561) Density varies:

- o A: directly with temperature and pressure.
- o B: inversely with pressure and directly with temperature.
- o C: directly with pressure and inversely with temperature.

562: (Q562) The velocity of sound at the sea level in a standard atmosphere is:

- o A: 661 kts.
- o B: 332 kts.
- o C: 644 kts.

563: (Q563) The rate-of-turn is the:

- o A: yaw rate in a turn.
- o B: change-of-heading rate of the aircraft.
- o C: aircraft speed in a turn.

564: (Q564) Pressure measured from atmospheric pressure is called....

- o A: gauge pressure.
- o B: relative pressure.
- o C: absolute pressure.

565: (Q565) The pressure probe used to measure the pressure of a low pressure fuel pump is:

- o A: a bellows sensor.
- o B: a capacitor.
- o C: a Bourdon tube.

566: (Q566) In a mechanical oil pressure gauge the sensing element is:

- o A: a bourdon tube.
- o B: a liquid capillary.
- o C: a helical bimetallic spring.

567: (Q567) Pitot pressure is a combination of:

- o A: Static pressure and position error.
- o B: Static pressure and dynamic pressure.
- o C: Dynamic pressure and position error.

568: (Q568) Dynamic Pressure is:

- o A: Pitot pressure plus static pressure.
- o B: Total pressure minus static pressure.

- o C: Static pressure minus pitot pressure.
- 569: (Q569) Pitot pressure is a combination of:
- o A: dynamic pressure minus pitot pressure.
 - o B: static pressure and dynamic pressure.
 - o C: static pressure and position error.
- 570: (Q570) Pressure errors which can be calculated and presented graphically in the aircraft manual include:
- o A: Configuration, maneuver and turbulence errors.
 - o B: Position and configuration errors.
 - o C: Position and maneuver errors.
- 571: (Q571) True airspeed is....
- o A: dependent on the air density.
 - o B: equal to dynamic pressure minus static pressure.
 - o C: the pressure caused by the forward movement of the aircraft.
- 572: (Q572) What will result if the instrument static pressure line becomes disconnected inside a pressurized cabin during cruise flight?
- o A: The altimeter and airspeed indicator will both read high.
 - o B: The altimeter will read low and the airspeed indicator will read high.
 - o C: The altimeter and airspeed indicator will both read low.
- 573: (Q573) During a walk around inspection, you observe covers over the pitot probes. Which items will be affected if the covers are not removed?
- o A: Flight recorder, autopilot, vertical speed indicator and airspeed.
 - o B: Flight recorder, airspeed and autopilot.
 - o C: Airspeed, altimeter and autopilot.
- 574: (Q574) Which instruments are connected to the aircraft pitot-static system?
- o A: vertical speed indicator, altimeter and airspeed indicator.
 - o B: turn coordinator, cabin altimeter and cabin rate-of-change indicator.
 - o C: turn-and-slip indicator, airspeed indicator and directional gyro (air operated).
- 575: (Q575) If the static vent becomes blocked on an unpressurized aircraft, what could the pilot do?
- o A: Break the VSI glass.
 - o B: Open the window.
 - o C: Select standby pitot source.
- 576: (Q576) A partially blocked air filter will cause the air-driven turn indicator to:
- o A: over read the correct rate of turn.
 - o B: indicate zero rate of turn.
 - o C: under read the correct rate of turn.
- 577: (Q577) In high speed flight at high altitude, the static source will suffer:
- o A: barometric error.
 - o B: position error.

o C: temperature error.

578: (Q578) Density errors are the result of variations in atmospheric....

o A: pressure only.

o B: pressure and temperature.

o C: temperature only.

579: (Q579) If the static source to an altimeter becomes blocked during a descent, the instrument:

o A: Continues to show the height at which the blockage occurred.

o B: Will progressively under-read.

o C: Will over-read by a constant amount.

580: (Q580) Pressure Error (PE) will cause an altimeter to:

o A: consistently under-read in a climb or descent.

o B: either over-read or under-read in level flight.

o C: only over-read in a climb.

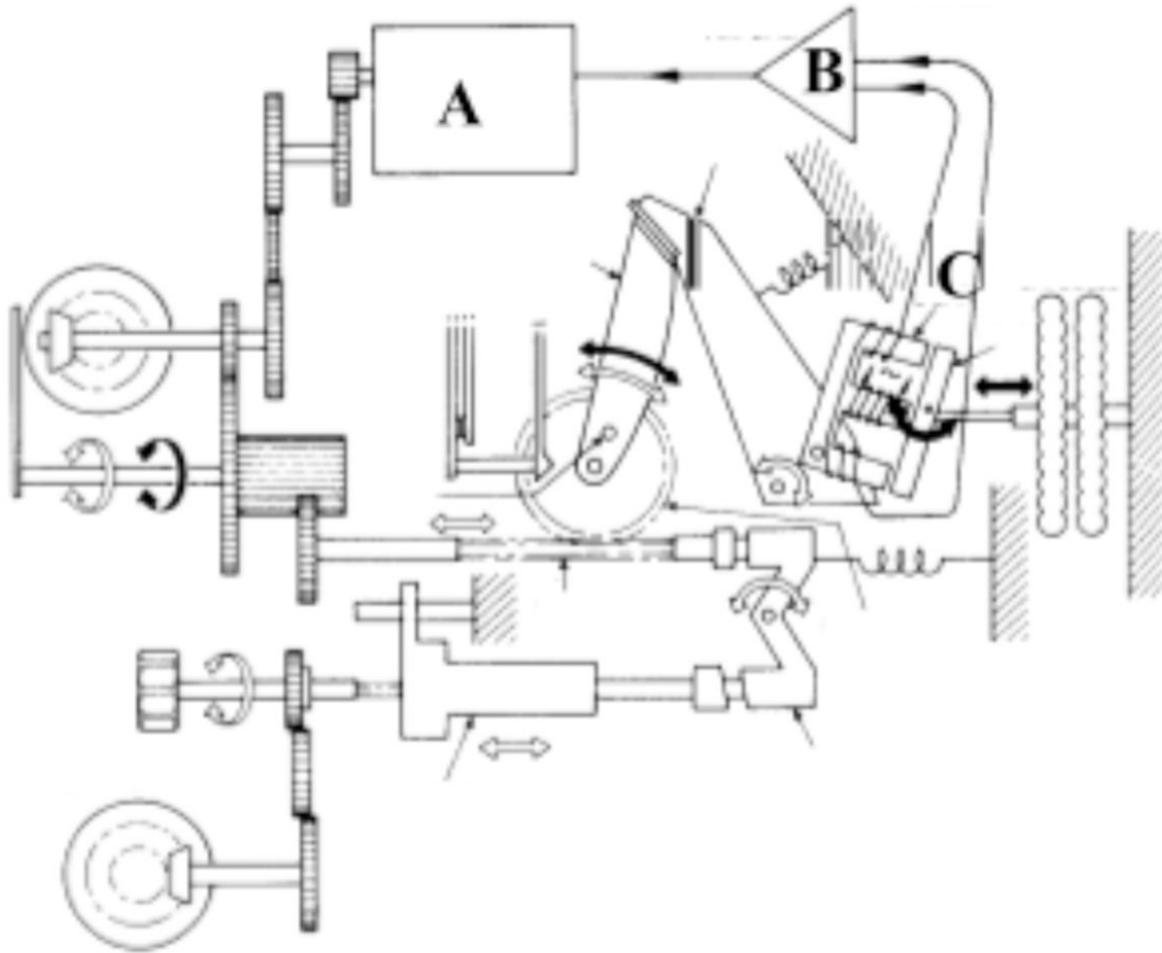
581: (Q581) When an aircraft altimeter is set at 1013 mbar (29,92 inHg) on the ground, the altimeter will read

o A: calibrated altitude.

o B: density altitude.

o C: pressure altitude.

582: (Q582) In the next figure of a servo altimeter the components labeled A, B and C in order are:



- o A: two way motor - amplifier - inductive pick-off
- o B: torque motor - amplifier - transducer
- o C: torque motor - inductive pick-off - amplifier

583: (Q583) In a servo-assisted altimeter, the secondary winding from the E-bar provides an electrical current direct to the:

- o A: capsule stack.
- o B: amplifier of the servomotor..
- o C: two phase motor.

584: (Q584) An aircraft takes off from an airfield 126 ft AMSL with a QFE of 994 hPa set. During flight, a regional QNH of 999 hPa is set. If the aircraft were to return to the departure point, where there had been no pressure change, without re-setting the altimeter, the height reading on landing would be:

- o A: 276 ft
- o B: 126 ft
- o C: 150 ft

585: (Q585) As a result of a blocked static vent during a rapid climb, the VSI displays:

- o A: zero rate of vertical speed.
- o B: an over-reading of the rate of climb.

o C: the correct rate of climb.

586: (Q586) The IVSI is:

- o A: Unreliable in pitch but reliable in roll.
- o B: Unreliable in unbalanced turns/angles of bank exceeding 40°.
- o C: only unreliable at angles of bank exceeding 55°.

587: (Q587) The function of the accelerometer in the IVSI is....

- o A: to give immediate response to vertical departures from horizontal flight.
- o B: to damp' the system during rapid alternating height changes.
- o C: to enable the instrument to be used at bank angles in excess of 40°.

588: (Q588) The purpose of the IVSI is to:

o A: give an instantaneous indication of the aircraft's vertical speed when a climb or descent has been initiated.

- o B: instantaneously indicate to the pilot when an aircraft pitches, especially in steep turns.
- o C: compensate for the change of pressure when initiating a climb or descent.

589: (Q589) The VSI-case is fed with ..(1)..... pressure and the capsule with ..(2)..... pressure.

- o A: (1) static - (2) pitot
- o B: (1) pitot - (2) static
- o C: (1) static - (2) static

590: (Q590) Compressibility error of the ASI is normally corrected by:

- o A: The calibration of the instrument.
- o B: The use of the navigation computer by the pilot.
- o C: Error is insignificant and can be ignored.

591: (Q591) During an approach to land at an airfield with the pitot source blocked, the Air Speed Indicator will show:

- o A: an increasing under read.
- o B: an increasing over read.
- o C: No change in the indication.

592: (Q592) During descent, a blockage of the static source will cause the ASI to:

- o A: over-read.
- o B: under-read.
- o C: either, depending on the attitude or configuration.

593: (Q593) Which of the following is not an error associated with the ASI?

- o A: Compressibility error.
- o B: Position error.
- o C: Barometric pressure error.

594: (Q594) If an aircraft were to climb after suffering a pitot blockage, the ASI would apparently:

- o A: under-read, indicating a decrease in speed.
- o B: show no change at all.
- o C: over-read, indicating an increase in speed.

595: (Q595) IAS is adjusted to CAS by the application of:

- o A: compressibility error.
- o B: instrument and pressure error.
- o C: density error.

596: (Q596) The case of an airspeed indicator is fed with:

- o A: Static pressure only.
- o B: Dynamic pressure only.
- o C: Pitot pressure only.

597: (Q597) If the static source becomes blocked with ice and the aircraft descends rapidly, the Machmeter will:

- o A: over-read.over-read.
- o B: under-read.under-read.
- o C: not be subject to any errors because of the dual capsule.not be subject to any errors because of the dual capsule.

598: (Q598) Machmeter readings are subject to:

- o A: instrument and compressibility errors.
- o B: instrument and pressure errors.
- o C: compressibility and position errors.

599: (Q599) The Machmeter has two capsules:

- o A: one responds to altitude, the other to airspeed.
- o B: 'one responds to airspeed, the other to the local speed of sound.'
- o C: one responds to altitude, the other to density.

600: (Q600) A transport airplane has to be equipped with an altitude warning device. This system will warn the crew about : 1. getting close to the preselected altitude, during both climb and descent; 2. getting close to the preselected altitude, during climb only; 3. the loss of altitude during take-off or missed approach; 4. a wrong landing configuration; 5. a variation higher or lower than a preselected altitude. The combination regrouping the correct statements is:

- o A: 2
- o B: 1, 3 and 4.
- o C: 1 and 5

601: (Q601) An 'altitude alerting system' must at least warn the crew: 1. when approaching the pre-selected altitude; 2. when the airplane is approaching the ground too fast; 3. in case of a given deviation above or below the pre-selected altitude (at least by an aural warning); 4. in case of excessive vertical speed; 5. when approaching the ground with the gear retracted. The combination regrouping all the correct statements is:

- o A: 1, 3, 4.
- o B: 2, 4, 5.
- o C: 1, 3.

602: (Q602) The purpose of the altitude alert system is to generate a visual and aural warning to the pilot when the:

- o A: airplane altitude differs from a selected altitude.
- o B: altimeter setting differs from the standard setting above the transition altitude.
- o C: proximity to the ground becomes dangerous.

603: (Q603) Altitude alert is when....

- o A: a decision of whether to land is made.
- o B: an alert of the selected altitude of the aircraft is reached.
- o C: an alert of the ground proximity is made.

604: (Q604) An encoding altimeter is a....

- o A: full digital altimeter.
- o B: pneumatic altimeter that sends a digital code to the ATC transponder.
- o C: combined altimeter and airspeed indicator.

605: (Q605) An air data computer (ADC) obtains altitude from....

- o A: Radio Altimeter.
- o B: GPS Satellite.
- o C: Barometric data from static source.

606: (Q606) What are the inputs to the ADC ? 1. OAT. 2. Dynamic pressure. 3. TAT. 4. Static pressure. 5. Vertical speed. 6. Pitot pressure.

- o A: 3, 4, 5 and 6.
- o B: 3, 4 and 6.
- o C: 1, 2, 5 and 6.

607: (Q607) An Air Data Computer (ADC):

- o A: Is an auxiliary system that provides altitude information in the event that the static source is blocked.
- o B: Measures position error in the static system and transmits this information to ATC to provide correct altitude reporting.
- o C: Transforms air data measurements into electric impulses driving servo motors in instruments.

608: (Q608) In An Air Data Computer (ADC), aeroplane altitude is calculated from:

- o A: The difference between absolute and dynamic pressure at the fuselage.
- o B: Measurement of elapsed time for a radio signal transmitted to the ground surface and back.
- o C: Measurement of absolute barometric pressure from a static source on the fuselage.

609: (Q609) When the moisture separator is purged in a pneumatic system, it dumps

- o A: the system between vacuum pump and regulator valve.
- o B: the whole system.
- o C: just the moisture trap.

610: (Q610) While carrying out a leak check of the altimeter, if the static is leaking, the VSI would:

- o A: indicate decent.
- o B: indicate climb.
- o C: not be affected.

611: (Q611) A static port is used to measure:

- o A: dynamic pressure plus pitot pressure.
- o B: atmospheric pressure.
- o C: dynamic pressure minus pitot pressure.

612: (Q612) Position error:

- o A: will depend solely on the attitude of the aircraft.
- o B: will usually decrease with an increase in altitude.
- o C: may be reduced by the fitting of static ports.

613: (Q613) Static ports are usually fitted to both sides of the aircraft fuselage. This will:

- o A: enable a greater number of instruments to be fitted.
- o B: reduce the position error.
- o C: balance out errors caused by side slipping or yawing.

614: (Q614) Direct reading aircraft thermometer usually consists of a bimetallic element protruding into the airstream. Movement of the pointer over the temperature scale will depend on:

- o A: different coefficients of expansion of the two metals.
- o B: difference in electrical resistance of the two metals.
- o C: increase in pressure as airspeed increases.

615: (Q615) When OAT increases what happens to a helicopter operating ceiling?

- o A: Decrease.
- o B: No effect.
- o C: Increase.

616: (Q616) A direct reading aircraft thermometer usually consists of a bimetallic helix protruding into the airstream. Movement of the pointer over the temperature scale will depend upon:

- o A: increase in pressure as airspeed increases.
- o B: difference in electrical resistance of the two metals.
- o C: different coefficients of expansion of the two metals.

617: (Q617) A remote reading thermometer depends upon....to indicate changes in temperature.

- o A: change of electrical resistance of the two metals.
- o B: change of electrical capacitance with change in temperature.
- o C: change of electrical resistance with temperature.

618: (Q618) An airspeed indicator has....

- o A: static connection only.
- o B: pitot and static connection.
- o C: pitot connection only.

619: (Q619) When climbing, the true airspeed....

- o A: will increase with constant IAS.
- o B: will decrease with a constant IAS.
- o C: remains the same.

620: (Q620) Direct reading aircraft thermometer usually consists of a bimetallic element protruding into the airstream. Movement of the pointer over the temperature scale will depend on:

- o A: different coefficients of expansion of the two metals.
- o B: increase in pressure as airspeed increases.
- o C: difference in electrical resistance of the two metals.

621: (Q621) The white sector of the arc of a temperature gauge corresponds to:

- o A: a normal operating range.
- o B: an exceptional operating range.
- o C: a special operating range.

622: (Q622) The sensors used to measure the exhaust gas temperature on an airplane equipped with turbojets are:

- o A: Based on metallic conductors whose resistance increases linearly with temperature.
- o B: Capacitors whose capacity varies proportionally with temperature.
- o C: Thermocouples.

623: (Q623) A thermocouple type thermometer consists of....

- o A: two metal conductors of the same type connected at two points.
- o B: two metal conductors of different type welded together at one point.
- o C: a Wheatstone bridge connected to a voltage indicator.

624: (Q624) A thermocouple can be made of:

- o A: a three wire coil.
- o B: two metal conductors of the same nature fixed together at two points.
- o C: 'two metal conductors of different nature fixed together at two points.'

625: (Q625) If one probe of a multi-sensor T.G.T. system failed , the reading would:

- o A: increase by 20 - 30 degrees C.
- o B: be practically unaffected.
- o C: fall to zero.

626: (Q626) In transport category airplanes, the temperatures are generally measured with: 1. resistance thermometers. 2. thermocouple thermometers. 3. reactance thermometers. 4. capacitance thermometers. 5. mercury thermometers. The combination regrouping all the correct statements is:

- o A: 1,3,4,5
- o B: 1,2,5
- o C: 1, 2.

627: (Q627) The indication of a fuel float gauge varies with: 1. Aircraft altitude. 2. Accelerations. 3. Atmospheric pressure. 4. Temperature. The combination of correct statement is:

- o A: 1,2,4.
- o B: 1, 2.
- o C: 1,2,3,4.

628: (Q628) The capacitor gauge principle is based on:

- o A: variation of the EMF in a Wheatstone bridge.
- o B: variation of capacitance by volume measure at the probe.
- o C: variation of capacitance of a capacitor with the nature of the dielectric.

629: (Q629) The quantity of fuel in the tanks is measured by capacitor type contents gauges. The working principle of these sensors is to measure the:

- o A: height of the fuel.
- o B: charge of condensers.
- o C: di-electric resistivity of the fuel.

630: (Q630) In a capacitive fuel gauging system an increase in fuel level would:

- o A: decrease capacitance.
- o B: increase capacitive reactance.
- o C: increase capacitance.

631: (Q631) A float fuel gauge system is....

- o A: adjusted when tanks are empty.
- o B: adjusted when tanks are full.
- o C: cannot be adjusted.

632: (Q632) The compensator in a fuel tank measures....

- o A: specific gravity of fuel.
- o B: capacitance of fuel transmitter.
- o C: fuel quantity.

633: (Q633) The degree of rigidity of a gyro depends on:

- o A: The rotor speed and weight distribution.
- o B: The rotor weight only.
- o C: The rotor speed only.

634: (Q634) A force applied to the spinning axis of a gyro is precessed:

- o A: through an angle equivalent to $15.04^\circ \times \sin \lambda$ (latitude).
- o B: through 90° in the direction of the force.
- o C: through 90° in the direction of rotor spin.

635: (Q635) Increasing the angular momentum of a gyro rotor will:

- o A: increase the gyroscopic rigidity.
- o B: decrease the gyroscopic rigidity.
- o C: have no substantial effect on gyroscopic rigidity.

636: (Q636) The gyro mass is concentrated at its edge to....

- o A: increase its speed of rotation.
- o B: increase its rigidity.
- o C: relieve bearing wear.

637: (Q637) Using a classic Artificial horizon, the aircraft performs a right turn (during 1 minute) through 270° at a constant angle of bank and rate of turn. The indication is:

- o A: Nose up, too much bank.
- o B: Nose up, not enough bank.
- o C: Bank and pitch correct.

638: (Q638) When turning (during 1 minute) through 90° at constant attitude and bank, a classic artificial horizon indicates:

- o A: Nose up and bank angle too low.
- o B: Nose up and bank angle too high.
- o C: Nose up and correct angle of bank.

639: (Q639) The acceleration errors of an electrically-driven attitude indicator are reduced compared to those of a vacuum driven one by:

- o A: spinning the electrical rotor slower.
- o B: inclination of the gyro spin axis.
- o C: reducing the erection rate of the gyro assembly.

640: (Q640) The inner gimbal assembly of an attitude indicator is pivoted..(1)..... in the...(2).....

- o A: (1) longitudinally - (2) outer gimbal.
- o B: (1) longitudinally - (2) rolling plane.
- o C: (1) to give freedom - (2) pitch plane.

641: (Q641) Using a compensated vacuum-driven attitude indicator during a turn....

- o A: there will be indication errors in pitch and roll.
- o B: there will be indication errors in pitch only.
- o C: the indications will be corrected for a selected speed and rate of turn.

642: (Q642) The artificial horizon uses:

- o A: a rate or restrained gyro.
- o B: a gravity controlled gyro.
- o C: a horizontally controlled gyro.

643: (Q643) With reference to a turn and bank indicator, the aircraft is in a balanced turn if:

- o A: the turn pointer and slip indicator are zero.
- o B: the turn pointer and slip indicator are displaced on the same side.
- o C: the turn is indicated and the slip is zero.

644: (Q644) The rate gyro indicates the correct rate of turn when the ..(1).... precession due to the spring is ..(2)..... to the ..(3)..... force.

- o A: (1) secondary - (2) equal - (3) primary applied.
- o B: (1) torqued - (2) opposite - (3) primary precessed.
- o C: (1) secondary - (2) opposite - (3) primary precessed.

645: (Q645) A leaking case on an air-driven turn and bank indicator will cause:

- o A: no appreciable error.
- o B: the turn to under-read.
- o C: the turn to over-read.

646: (Q646) When turning right onto the runway prior to take-off, the ball on the turn and bank indicator will:

- o A: move to the right.
- o B: move to the left.
- o C: stay central in the turn.

647: (Q647) On an instrument check whilst taxiing, when carrying out a turn, the ball on the turn and bank indicator should indicate:

- o A: a skid out of the turn.
- o B: a slip into the turn.
- o C: no slip or skid.

648: (Q648) A faulty rate of turn and bank indicator in a general aviation aircraft may be checked by a pilot in the air by....

- o A: comparing the indication with the attitude indicator.
- o B: timing an indicated rate one turn.
- o C: slipping the aircraft right or left.

649: (Q649) The rotor of a rate gyroscope is over speeding. The pilot carries out a turn with the rate gyroscope indicating RATE 1. The actual rate of turn will be:

- o A: less than 3° per second.
- o B: 3° per second.
- o C: more than 3° per second.

650: (Q650) The principle of operation of the turn and bank indicator is best described as:

- o A: an earth gyro in which a calibrated spring ensures the tilt of the gyro is proportional to the aircraft rate of turn.
- o B: a single gimbal gyroscope in which a spring, opposing the primary precession, in turn produces a secondary precession equal to the aircraft rate of turn.
- o C: a single gimbal gyroscope whose primary precession is opposed by a spring which, in turn, produces a second precession equal and opposite the aircraft rate of turn.

651: (Q651) The errors of a DGI are: 1. Earth rate. 2. Transport wander. 3. Banking when pitched up. 4. Annual movement of poles. 5. Mechanical problems.

- o A: 3, 4 & 5.
- o B: 2, 3 & 5.
- o C: 1, 2, 3 & 5.

652: (Q652) The indication of the directional gyro as an on-board instrument are valid only for a short period of time. The causes of this inaccuracy are: 1. The earth's rotation. 2. The longitudinal acceleration. 3. The aircraft's motion over the surface of the earth. 4. The mechanical defects of the gyro. 5. The gyro's weight. 6. The gimbal mount of the gyro rings. The combination of correct statements is:

- o A: 1, 3, 4.
- o B: 2, 5, 6.
- o C: 1, 3, 4, 6.

653: (Q653) The directional gyro keeps its rotation axis aligned toward:

- o A: A point in space.
- o B: Magnetic North.
- o C: Geographic North.

654: (Q654) The purpose of the flux-valve is:

- o A: To measure the strength of the earth's magnetic field.
- o B: To sense the direction of the earth's magnetic field relative to the airplane.
- o C: To provide flux for the automatic slaving system.

655: (Q655) A slaved directional gyro derives its directional signal from:

- o A: A direct reading magnetic compass.
- o B: The air data computer.
- o C: The flux valve.

656: (Q656) The purpose of the slaving torque motor is:

- o A: To produce a precessive force in order to align the gyro with the earth's magnetic field.
- o B: To send heading information to the compass card in the heading indicator.
- o C: To ensure that the gyro wheel maintains sufficient speed to stay rigid in space.

657: (Q657) Deviation compensation in a flux gate compass is done:

- o A: Automatically within the compass system.
- o B: Mechanically.
- o C: Electronically.

658: (Q658) A flux valve senses the changes in orientation of the horizontal component of the earth's magnetic field. 1. The flux valve is made of a pair of soft iron bars. 2. The primary coils are fed AC voltage (usually 487.5 Hz). 3. The information can be used by a 'flux gate' compass or a directional gyro. 4. The flux gate valve casing is dependent on the aircraft three inertial axis. 5. The accuracy on the value of the magnetic field indication is less than 0.5 %. Which of the following combinations contains all of the correct statements?

- o A: 1, 3, 4, 5.
- o B: 2, 3, 5.
- o C: 1, 4, 5.

659: (Q659) The Ground Proximity Warning systems mode 1 is activated when

- o A: An excessive height loss is experienced after take-off during go-around.
- o B: The barometric descent rate is excessive with respect to the aircraft height above the terrain.
- o C: The aircraft is flying into rising terrain.

660: (Q660) The Ground Proximity Warning systems mode 2 is activated when

- o A: The barometric descent rate is excessive with respect to the aircraft height above the terrain.
- o B: An excessive height loss is experienced after take-off during go-around.
- o C: The aircraft is flying into rising terrain.

661: (Q661) The Ground Proximity Warning systems mode 3 is activated when

- o A: An excessive height loss is experienced after take-off during go-around.
- o B: The aircraft is flying into rising terrain.
- o C: The barometric descent rate is excessive with respect to the aircraft height above the terrain.

662: (Q662) The Ground Proximity Warning systems mode 4 is activated when

- o A: When the aircraft is significantly below its ILS glidepath.
- o B: An unsafe clearance situation is experienced, with the aircraft not in the landing configuration.
- o C: An excessive height loss is experienced after take-off during go-around.

663: (Q663) The Ground Proximity Warning systems mode 5 is activated when

- o A: An unsafe clearance situation is experienced, with the aircraft not in the landing configuration.
- o B: An excessive height loss is experienced after take-off during go-around.
- o C: When the aircraft is significantly below its ILS glidepath.

664: (Q664) If an aircraft is flying (with flaps and landing gear retracted) in proximity to terrain and its GPWS (Ground Proximity Warning System) get activated, because it is detecting that the airplane has an excessive rate of descent, the system provides the following aural warning signals:

- o A: ...SINK RATE, SINK RATE ... followed by ... WHOOP WHOOP PULL UP ... (twice).
- o B: ... TOO LOW, TERRAIN ... (twice) followed by ... TOO LOW GEAR ... (twice).
- o C: ... TERRAIN, TERRAIN ... followed by ... WHOOP WHOOP PULL UP ... (twice).

665: (Q665) If the GPWS (Ground Proximity Warning System) activates, and alerts the pilot with an aural warning 'DON'T SINK' (two times), it is because:

- o A: the aircraft experiences an unexpected proximity to terrain, without landing-flap selected.
- o B: the aircraft experiences an unexpected proximity to the terrain, with landing gear retracted.
- o C: during take-off or missed approach maneuver, the aircraft has started to loose altitude.

666: (Q666) Hard iron is the name given to a metal which:

- o A: Is difficult to magnetize and loses its magnetism easily.
- o B: Is difficult to magnetize and retains its magnetism.
- o C: Is easy to magnetize and loses its magnetism easily.

667: (Q667) At a given place, compass deviation will:

- o A: Depend on the value of variation.
- o B: Be constant always.
- o C: Vary with aircraft heading.

668: (Q668) In a direct reading compass, horizontality is achieved by....

- o A: using jeweled bearings.
- o B: changing the magnet system in a liquid-filled bowl.
- o C: using pendulous suspension.

669: (Q669) When accelerating on an easterly heading in the northern hemisphere, the magnet system of a direct reading compass will:

- o A: Turn anti-clockwise. indicating an apparent turn towards North.
- o B: Turn anti-clockwise, indicating an apparent turn towards South.
- o C: Turn clockwise, indicating an apparent turn towards North.

670: (Q670) The purpose of fitting an expansion unit to a direct reading compass is to....

- o A: compensate for leaks in the system.
- o B: minimize liquid swirl.
- o C: compensate for expansion/contraction of the liquid.

671: (Q671) The flight data recorders must preserve the required data of the last:

- o A: 25 hours of operation.
- o B: 30 minutes of operation.

o C: 48 hours of operation.

672: (Q672) The flight data recorder must automatically stop data recording when the....

- o A: main gear shock strut compresses when touching the runway.
- o B: airplane clears the runway.
- o C: the airplane is on the ground and the engines are turned off.

673: (Q673) The Flight Data Recorder actually starts running:

- o A: at the beginning of the T/O run.
- o B: when a/c lines up on runway.
- o C: before the a/c starts moving under its own power.

674: (Q674) A FDR fitted to an aircraft of over 5700kgs after April 98 must record for:

- o A: 25 hours.
- o B: 30 minutes.
- o C: 60 minutes.

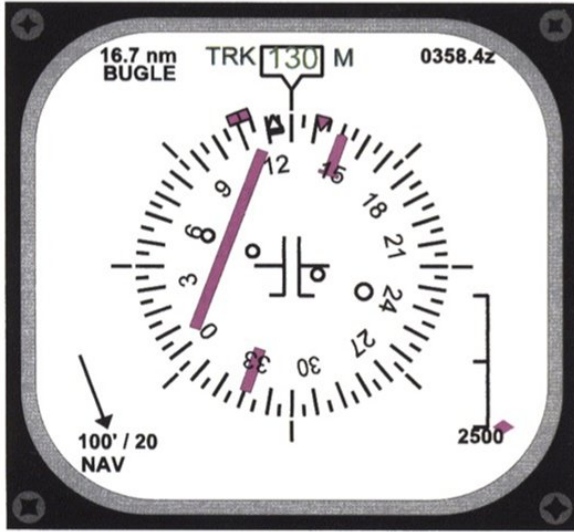
675: (Q675) Where in the aircraft should the FDR be fitted according to the EASA regulations?

- o A: At the rear of the aircraft.
- o B: In the nose landing gear bay.
- o C: In the wings.

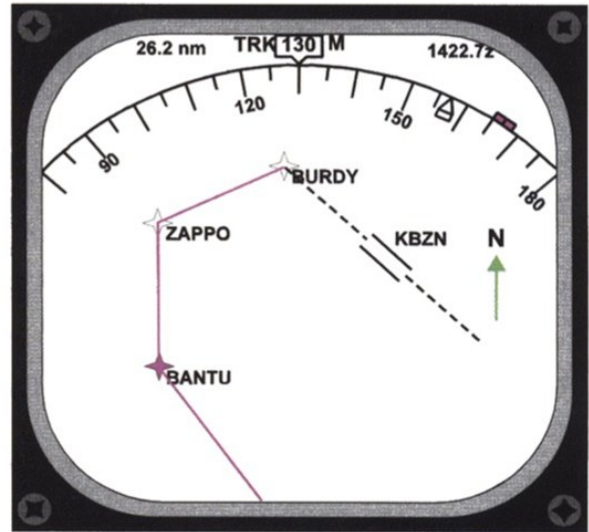
676: (Q676) What does a FDR record when combined with a CVR? 1. Cockpit voice; 2. Radio; 3. Public addresses from the cockpit; 4. Cabin voice

- o A: 1, 2 and 3.
- o B: 2 and 4.
- o C: all 4.

677: (Q677) The displays marked A, B, C and D are respectively: (See the figure)



A



B



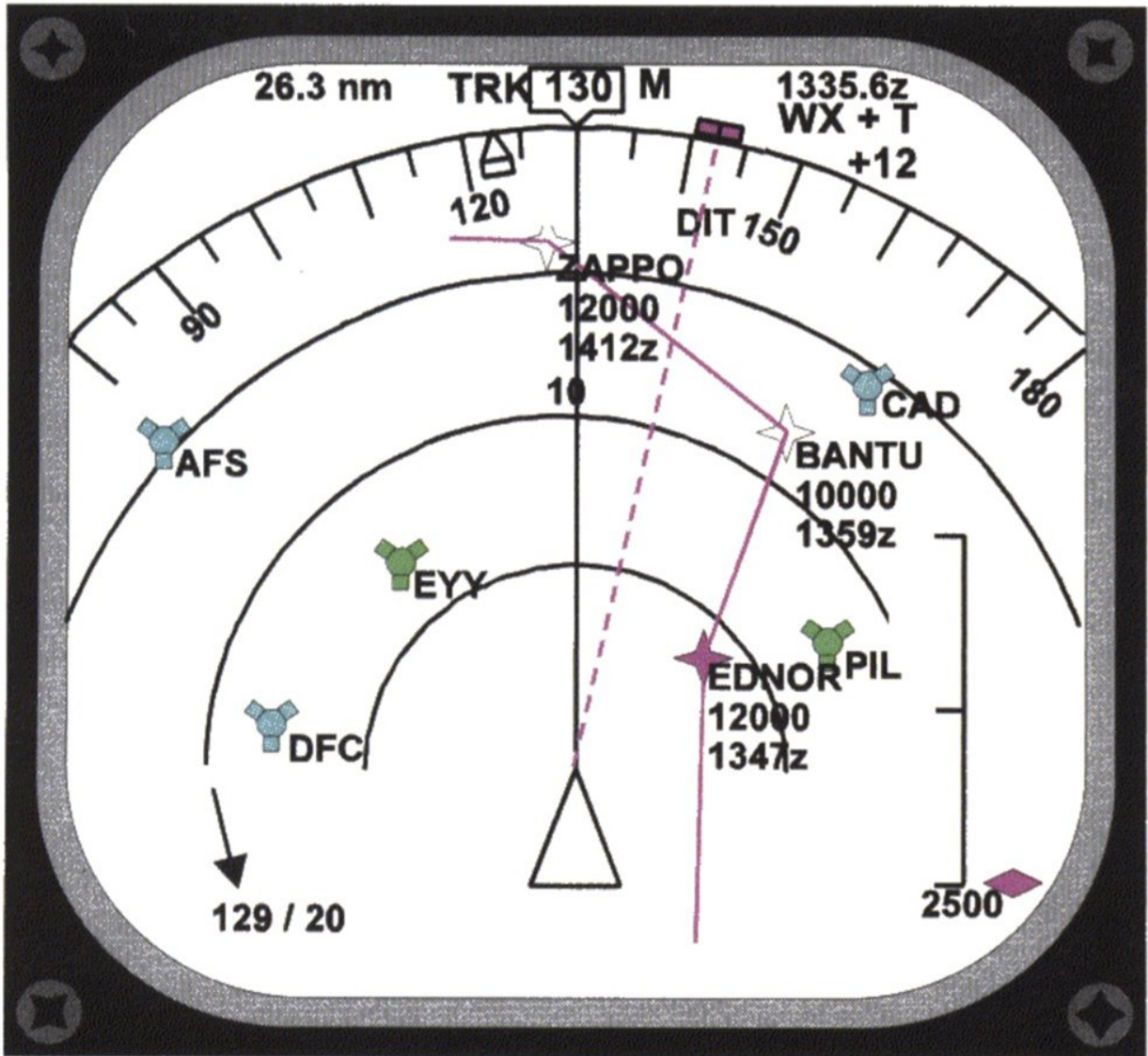
C



D

- o A: A. MAP - B. VOR - C. ILS - D. Plan
- o B: A. VOR - B. ILS - C. NAV - D. Plan
- o C: A. NAV - B. PLAN - C. VOR - D. ILS

678: (Q678) Identify the correct statement (See the figure)



- o A: When established on the localiser the inbound heading will be 165°M.
- o B: The aircraft is closing the localiser from the right, heading 130°M and is approaching the glide path from above.
- o C: The aircraft's track is 165°M.

679: (Q679) The centre of the weather return is : (See the figure)



- o A: 30 nm left of track, 15 nm ahead.
- o B: 106° relative, 18 nm.
- o C: 332° relative, 13 nm.

680: (Q680) This amber symbol appears in place of the normal altitude display when: (See the figure)

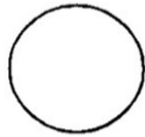


- o A: there is a failure of the radio altimeter.
- o B: the radio altitude needs re-setting on the EHSI.
- o C: the selected radio altitude has been reached.

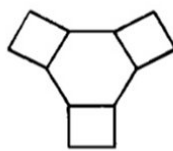
681: (Q681) The symbols A, C and E are best described respectively as: (See the figure)



A



B



C



D



E

- o A: (A) active waypoint aircraft currently navigating to - (C) navigation aid - (E) off route waypoint.
- o B: (A) off route waypoint - (C) navigation aid - (E) a navigation point making up selected route.
- o C: (A) next waypoint - (C) navigation aid - (E) airport.

682: (Q682) WXR display is on:

- o A: on both the captains and co-pilots screens.
- o B: the co-pilots screen only.
- o C: the captains screen only.

683: (Q683) Airspeed is shown:

- o A: on both EHSIs.
- o B: on both EADIs.
- o C: only on the pilot in commands EHSI.

684: (Q684) With an EFIS flight director using IRS guidance, reference north can be:

- o A: magnetic north between 73°N and 65°S and true north above these latitudes.
- o B: magnetic north only.
- o C: true north between 73°N and 65°S and magnetic north above these latitudes.

685: (Q685) Mode available for (EFIS) HSI on some units are:

- o A: Airspeed and Mach.
- o B: VOR, ILS, MAP and AUTO TRIM.
- o C: MAP and PLAN.

686: (Q686) An EFIS, having a control panel, symbol generators and a remote light sensor, also has:

- o A: EADIs and EICAS.
- o B: EADIs and EHSIs.
- o C: EADIs and WXR displays.

687: (Q687) Alarms are standardized and follow a code of colors. Those requiring action but not immediately, are signaled by the color:

- o A: red.
- o B: flashing red.
- o C: amber.

688: (Q688) In a modern airplane equipped with an ECAM (Electronic centralized aircraft monitor), when a failure occurs in a circuit, the centralized flight management system: 1. releases an aural warning. 2. lights up the appropriate push-buttons on the overhead panel. 3. displays the relevant circuit on the system display. 4. processes the failure automatically. The combination regrouping all the correct statements is:

- o A: 1, 2 and 3.
- o B: 1, 3 and 4.
- o C: 3 and 4.

689: (Q689) The level of alert for conditions that require immediate flight crew awareness and subsequent flight crew response is..... Engine overheat or low oil pressure are typical examples.

- o A: a warning.
- o B: alert message.
- o C: a caution.

690: (Q690) The level of alert for conditions that require immediate flight crew awareness and immediate flight crew response is..... Loss of cabin pressure or an engine fire are typical examples.

- o A: a caution.
- o B: a warning.
- o C: alert message.

691: (Q691) The following are time-critical warnings: 1. terrain awareness warnings. 2. overspeed warnings. 3. wind shear warnings. 4. TCAS resolution advisory. 5. low energy warnings. The combination regrouping all the correct time-critical warnings is:

- o A: 1, 2, 3, 4 and 5.
- o B: 1, 2 and 3.
- o C: 2, 3 and 4.

692: (Q692) The alerting system functional components used to accomplish the alerting and informing functions for warnings should include:

- o A: visual information, master aural alert and voice information.

- o B: master visual alert, and visual information and master aural alert.
- o C: master visual alert or visual information and master aural alert.

693: (Q693) A stall warning system is based on a measure of:

- o A: angle of airflow sensor and flap position transmitter.
- o B: Groundspeed.
- o C: Airspeed.

694: (Q694) The main input data to the Stall Warning Annunciator System are: 1. Mach Meter indication. 2. Angle of Attack. 3. Indicated Airspeed (IAS). 4. Aircraft configuration (Flaps/Slats). The combination regrouping all the correct statements is:

- o A: 2, 3.
- o B: 2, 4.
- o C: 1, 2.

695: (Q695) The angle of attack transmitter provides an electric signal varying with: 1. the angular position of a wind vane. 2. the deviation between the airplane flight attitude and the path calculated by the inertial unit. 3. a probe differential pressure depending on the variation of the angle of attack. The combination regrouping all the correct statements is:

- o A: 2 and 3.
- o B: 1 and 3.
- o C: 1 and 2.

696: (Q696) The input to a basic stall warning system is:

- o A: Slat/flap position.
- o B: IAS.
- o C: Angle of attack.

697: (Q697) Stall warning will be given at speeds....

- o A: lower than stall speed.
- o B: at the actual stall speed.
- o C: higher than stall speed.

698: (Q698) Angle of attack may be sensed by means of ...(1) ...mounted ...(2)...

- o A: (1) a stick pusher - (2) adjacent to the flying controls.
- o B: (1) a conical slotted probe - (2) on the wing leading edge.
- o C: (1) a hinged vane sensor - (2) on the wing leading edge.

699: (Q699) When a stall warning occurs, the angle of attack vane....

- o A: moves up.
- o B: moves down.
- o C: moves aft.

700: (Q700) An engine vibration indicator receives a signal from different sensors (accelerometers). It indicates the:

- o A: Vibration frequency expressed in Hz.
- o B: Vibration amplitude at a given frequency.
- o C: Acceleration measured by the sensors, expressed in g.

701: (Q701) In an engine vibration monitoring system for a turbojet any vibration produced by the engine is:

- o A: inversely proportional to engine speed.
- o B: amplified and filtered before being fed to the cockpit indicator.
- o C: fed directly to the cockpit indicator without amplification or filtering.

702: (Q702) A vibration meter measures the....

- o A: frequency in Hz.
- o B: amplitude at a given frequency.
- o C: period in seconds.

703: (Q703) The Primary Flight Display (PFD) displays information dedicated to:

- o A: systems.
- o B: piloting.
- o C: engines and alarms.

704: (Q704) The Head Up Display (HUD) is a device allowing the pilot, while still looking outside, to have:

- o A: a synthetic view of the instrument procedure.
- o B: a monitoring only during Cat III precision approaches.
- o C: a navigating control aid.

705: (Q705) Information from a sensor to a display is provided electronically to the processing unit, commonly called a.....

- o A: video graphics card.
- o B: video card.
- o C: symbol generator.

706: (Q706) One of the advantages of the OMS (Onboard Maintenance System) is ...

- o A: to help the pilots do a minor maintenance task.
- o B: to replace the tech log.
- o C: to detect and report failure.

707: (Q707) Access to the Central Maintenance Computers is through....

- o A: a control box.
- o B: a press-to-test switch on the computer itself.
- o C: the line select keys on the CDU.

708: (Q708) When a..... is displayed, the aircraft is considered unserviceable (only specific failures are permitted to exist as stated in the MEL).

- o A: Fault Code.
- o B: Status Message.
- o C: Maintenance Message.

709: (Q709) Where is the loaded software held?

- o A: CMC (Central Maintenance Computer) storage device, ready to be reinstalled should something happen that corrupts a particular program.

- o B: On the flight deck, ready to be reinstalled should something happen that corrupts a particular program.
- o C: In a centralized maintenance cabinet, ready to be send and reinstalled should something happen that corrupts a particular program.

710: (Q710) Data loading is a....

- o A: reading or writing information facility.
- o B: reading information facility.
- o C: writing information facility.

711: (Q711) A FMS navigation database is updated

- o A: at the operators request.
- o B: once a month.
- o C: every 28 days.

712: (Q712) The FMS is updated

- o A: by an aircraft engineer updating the system either by a floppy disc, a CD or even a hard disk.
- o B: by the aircrew by reference to the Tech Log.
- o C: automatically by update from the ACARS.

713: (Q713) Which system provides airline flight, maintenance, and cabin crews with instantaneous access to operational manuals, procedures and navigation charts?

- o A: ELS (Electronic Library System).
- o B: FMS (Flight Management System).
- o C: OMS (Onboard Maintenance System).

714: (Q714) Information updates to the airborne system and communications between the ground based and airborne systems are accomplished ...

- o A: automatically by update from the ECAM.
- o B: through the Gate-link concept.
- o C: by an aircraft engineer updating the system either by a floppy disc, a CD or even a hard disk.

715: (Q715) An Electronic Library System consists of : 1. a LCD. 2. an optical disk drive. 3. a printer. 4. a workstation platform. 5. capacitive touch screen overlay. 6. A keyboard.

- o A: 1, 2, 3, 4 and 5.
- o B: 1, 3, 4 and 5.
- o C: 1, 2, 3 and 6.

716: (Q716) Direct texts entry for airport directory or word searches on the Electronic Library System is done by ...

- o A: a keyboard underneath the active-matrix liquid display.
- o B: a soft keyboard function, displayed on the liquid display screen.
- o C: the scratch pad on the CDU.

717: (Q717) Information to be printed is sent to the printer ...

- o A: from the CDU (Control Display Unit).
- o B: from the FMC (Flight Management Computer).
- o C: from the CMC (Central Maintenance Computer).

718: (Q718) Defects of the printer are notified ...

- o A: by way of lamps on the front of the panel itself.
- o B: by a fault report to the CDU (Control Display Unit).
- o C: by a fault report to the CMC (Central Maintenance Computer).

719: (Q719) The printer used in the cockpit is....

- o A: a laser printer.
- o B: a dot matrix printer.
- o C: an inkjet printer.

720: (Q720) A permanent monitoring of the vertical acceleration (G-force) of an aircraft during landing is a part of....

- o A: the 'HUMS' (Health and Usage Monitoring System).
- o B: the 'Low Cycle Fatigue Counter'.
- o C: the 'Damage Tolerance Monitoring'.

721: (Q721) Helicopter rotor track and balance is done by

- o A: the 'Damage Tolerance Monitoring System'.
- o B: the 'Low Cycle Fatigue Counter'.
- o C: the 'HUMS' (Health and Usage Monitoring System).

722: (Q722) Which system can also be used to monitor the aircraft's structure and thus identify any faults before they cause catastrophic failure.

- o A: the Electronic library system.
- o B: the CDU (Control Display Unit).
- o C: the Flight Data Recorder.

723: (Q723) Maintenance Information at an out-station can be read from the....

- o A: CDU (Control Display Unit).
- o B: FMS (Flight Management system).
- o C: Electronic library system.

724: (Q724) Waste water drain mast....

- o A: are heated to a lower temperature with the aircraft on ground.
- o B: are not heated.
- o C: are heated to a high temperature in the air and on ground.

725: (Q725) How are drinking water pipes are prevented from freezing?

- o A: Installation of neoprene foam insulation.
- o B: Wrapping the pipes with heated tapes or blankets.
- o C: Placing the pipes adjacent to hot water piping.

726: (Q726) What type of valve is the toilet tank drain valve?

- o A: Spring loaded open.
- o B: Spring loaded closed.
- o C: Not spring loaded.

727: (Q727) Communication in the integrated modular avionics network is partly standardized in...

- o A: ARINC 429, ARINC 653 or AFDX.
- o B: ARINC 429 or AFDX (Avionics Full Duplex).
- o C: ARINC 653 for the software avionics and AFDX for the data network bus.

728: (Q728) The standardized Real-Time Operating system used in IMA uses the.....

- o A: ARINC 653 specification.
- o B: ARINC 429 specification.
- o C: RTOS specification.

729: (Q729) An airborne Ethernet electrical cable (AFDX) is

- o A: equipped with 8 pins RJ45 connectors.
- o B: equipped with 4 pins RJ45 connectors.
- o C: equipped with 4 pins Quadrx connectors.

730: (Q730) Which LRU is the interface between the aircraft systems and the ARINC network remote switches and convert network data to the appropriate format.

- o A: ARINC 664 remote switches.
- o B: AFDX switches.
- o C: Remote Data Concentrators.

731: (Q731) For IMA, a faster and duplex data communication protocol was required than the ARINC 429 standard. The new standard is ..

- o A: ARINC 429 duplex.
- o B: ARINC 664.
- o C: AFDX (Avionics Full Duplex).

732: (Q732) The first 2 bytes of the IP address for IMA communication are called ...

- o A: the Net ID.
- o B: Sign Status Matrix (SSM).
- o C: Host ID.

733: (Q733) The ARINC 664 Ethernet has a transport rate of ...

- o A: 100 gigabits per second.
- o B: 100 megabits per second.
- o C: 100 kilobits per second.

734: (Q734) The core network system has ...

- o A: an open data network and an isolated data network.
- o B: an ethernet network and an crew information network.
- o C: an open data network, an isolated data network and an avionics network.

735: (Q735) Which network system routes data between the airplane and ground networks and stores airline data and applications?

- o A: IMA (core network).
- o B: ATIS.
- o C: IDN.

736: (Q736) Airplane system data not critical to flight are connected to the..... In the Core Network System.

- o A: Crew Wireless LAN Unit (CWLU).
- o B: Common Data Network (CDN).
- o C: Open Data Network (ODN).

737: (Q737) Airplane system data critical to flight are connected to the..... In the Core Network System.

- o A: Common Data Network (CDN).
- o B: Isolated Data Network (IDN).
- o C: Open Data Network (ODN).

738: (Q738) 'Some LRMs (Line Replaceable Modules) from the Integrated Modular Avionics communicate with each other through the ADCN (Avionics Data Communication Network) by the means of communication technology developed from a non-aeronautical standard.' This technology is called....

- o A: Automatic Dependent Surveillance Broadcast (ADS-B).
- o B: AFDX (Avionics Full Duplex Switched Ethernet).
- o C: Controller Pilot Data Link communications (CPDLC).

739: (Q739) This is a.... (See the figure)



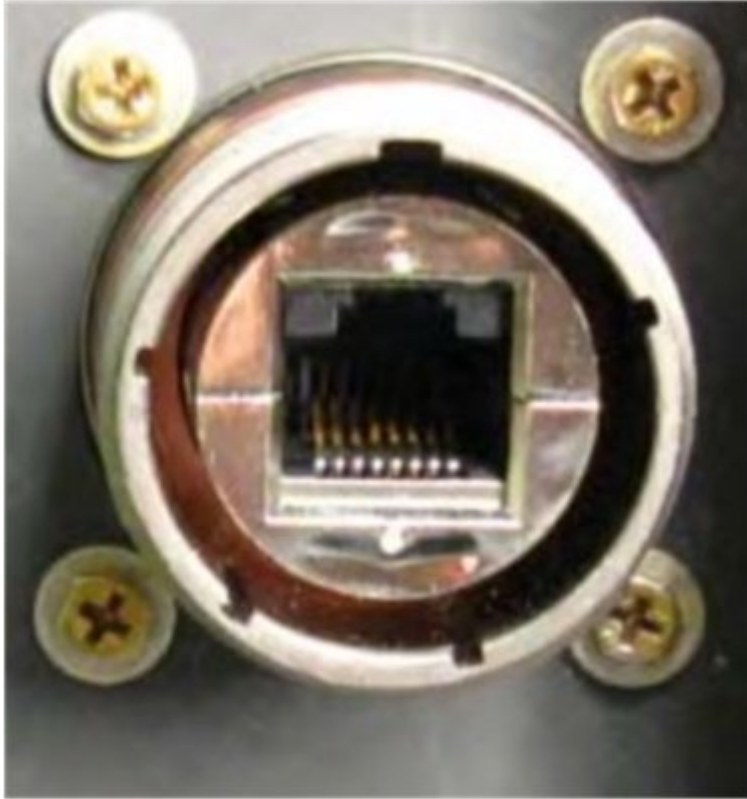
- o A: RJ45 connector.
- o B: RJ61 connector.
- o C: RJ12 connector.

740: (Q740) This is a.... (See the figure)



- o A: QuadraX connector.
- o B: Coaxial connector.
- o C: LC connector (fibre optic).

741: (Q741) This is a(n).... (See the figure)



- o A: Quadrax port.
- o B: RJ45 port.
- o C: Ethernet port.

742: (Q742) The ARINC 664 Ethernet uses ...

- o A: two twisted wire pairs or quad cables as the transport medium for full duplex operation at 100 megabits per second.
- o B: a pair of twisted wires with shielding around them for full duplex operation at 2 megahertz.
- o C: a high speed, two way, multiple terminal digital data bus operating at 2 megahertz.

743: (Q743) What are the three functional domains of IMA (Integrated Modular Avionics)?

- o A: Cockpit, cabin and utilities.
- o B: Ground, flight and transit.
- o C: Flight, navigation and systems.

744: (Q744) The passengers can listen to the selected audio and video channels by connecting a headset to ...

- o A: the IFES SDU (In-Flight Entertainment System Smart Display Unit).
- o B: the IFES SEB (Seat Electronic Box).
- o C: the IFES RJU (Remote Jack Unit).

745: (Q745) What is the primary control interface between the IFES (In Flight Entertainment System) and cabin and maintenance crews?

- o A: The IFES SC (system controller).
- o B: The IFES AMCU (Advanced Master Control Unit).

o C: The IFES CP (Crew Panel).

746: (Q746) The In-seat audio and video channels and volume can be selected and adjusted by the passenger using the....

o A: IFES PCU (passenger control unit).

o B: IFES AMCU (Advanced Master Control Unit).

o C: IFES SC (In-flight Entertainment System System Controller).

747: (Q747) Which discrettes provides the PSEU (Proximity Switch Electronics Unit) to the IFES SC (In-Flight Entertainment System Controller)?

o A: Air/ground discrete; IRS (Inertial Reference System) position discrete; ADC (Air Data Computer) discrettes (Airspeed, Ground speed, Mach number, altitude).

o B: Air/ground discrete; air speed discrete; altitude discrete, GPS position discrete.

o C: Air/ground discrete; parking brake discrete; start take-off roll discrete; nose landing gear discrete.

748: (Q748) Each Ethernet station is given a 48-bit address. How are the first two fields called?

o A: Country Code.

o B: Source/destination Identifier (SDI).

o C: Parity Bit.

749: (Q749) The inflight entertainment equipment is connected to ...

o A: its own network system, completely isolated from the Core network system.

o B: the IDN (Isolated Data Network) of the Core network system.

o C: the ODN (Open Data Network) of the Core network system.

750: (Q750) Data can be transferred wirelessly from the In-flight Entertainment system on the aircraft to a terminal receiving station on the ground through....

o A: the ACR (Avionics Communication Router).

o B: the ATIS (Automatic Terminal Information Service).

o C: the use of the GSM Cell Data Mode (CDM), also referred to as Cell Modem (CM).

751: (Q751) Data from the In-Flight Entertainment system can be transferred to a terminal station on the ground

o A: through a wireless GSM Cell Data Modem when the aircraft is at the terminal.

o B: through an ethernet link when the aircraft is on the ground.

o C: through an ethernet link when the aircraft is at the terminal.

752: (Q752) The external communication (IFE) system provides communication with the aircraft while grounded through ...

o A: a cell modem component and an antenna located in the aircraft.

o B: a cell modem component and a terminal receiving station..

o C: an ethernet connection in the aircraft.

753: (Q753) Which unit serves as the direct interface with the air-to-ground narrow band or broadband equipment and provides extensive audio, video and cached web content?

o A: The ADB (Area Distribution Box).

o B: The FS (file server).

o C: The AMCU (Advanced Master Control Unit).

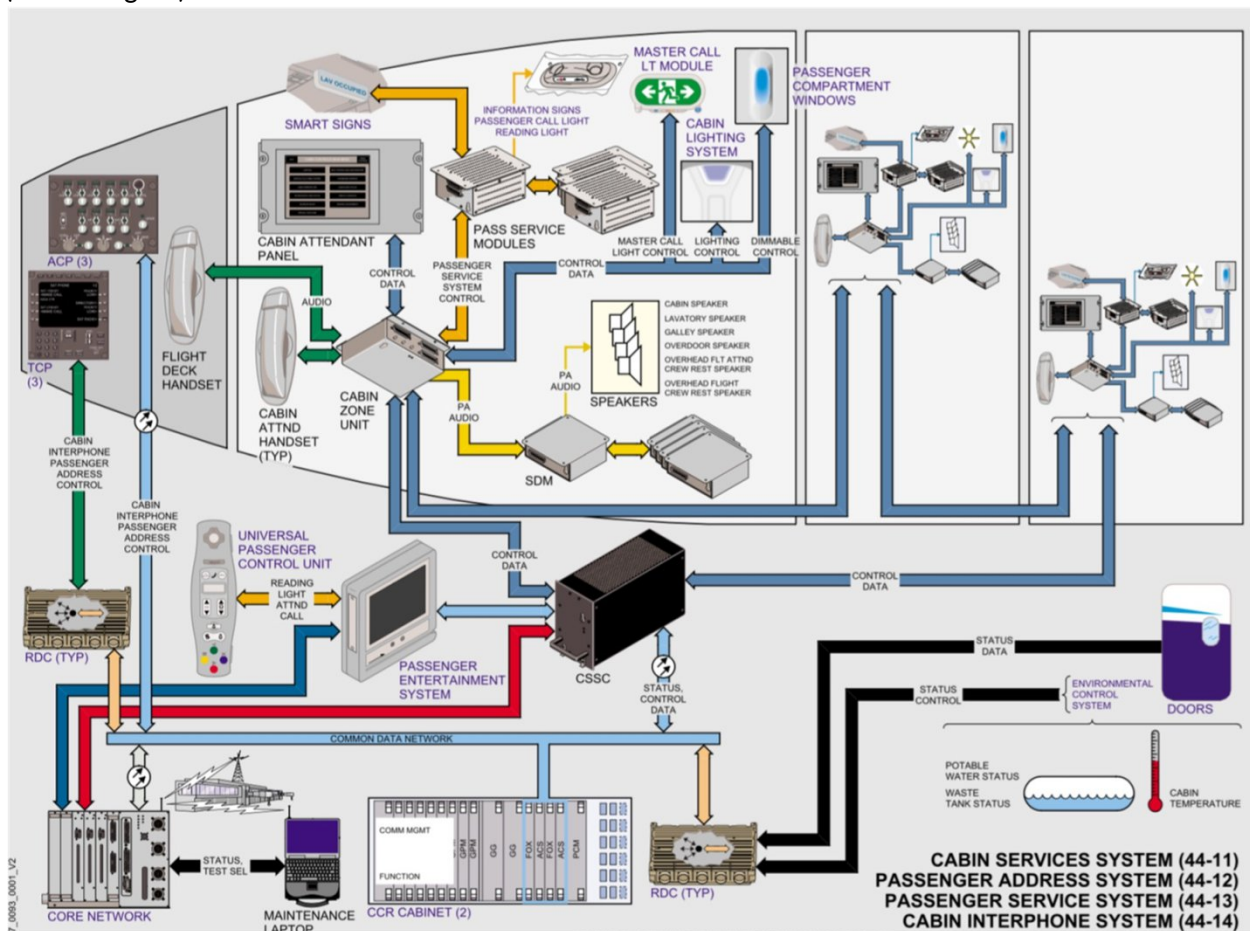
754: (Q754) Which unit gathers information for proximity sensors to determine the flight phase and sends discretes to the System Controller to provide it with flight phase information for the passengers?

- o A: The PSEU (Proximity Switch Electronics Unit).
- o B: The INS (Inertial Navigation System) or IRS (Inertial Reference system).
- o C: The FMS (Flight Management System).

755: (Q755) Which unit lets the crew monitor and control the CSS (Cabin Services System)?

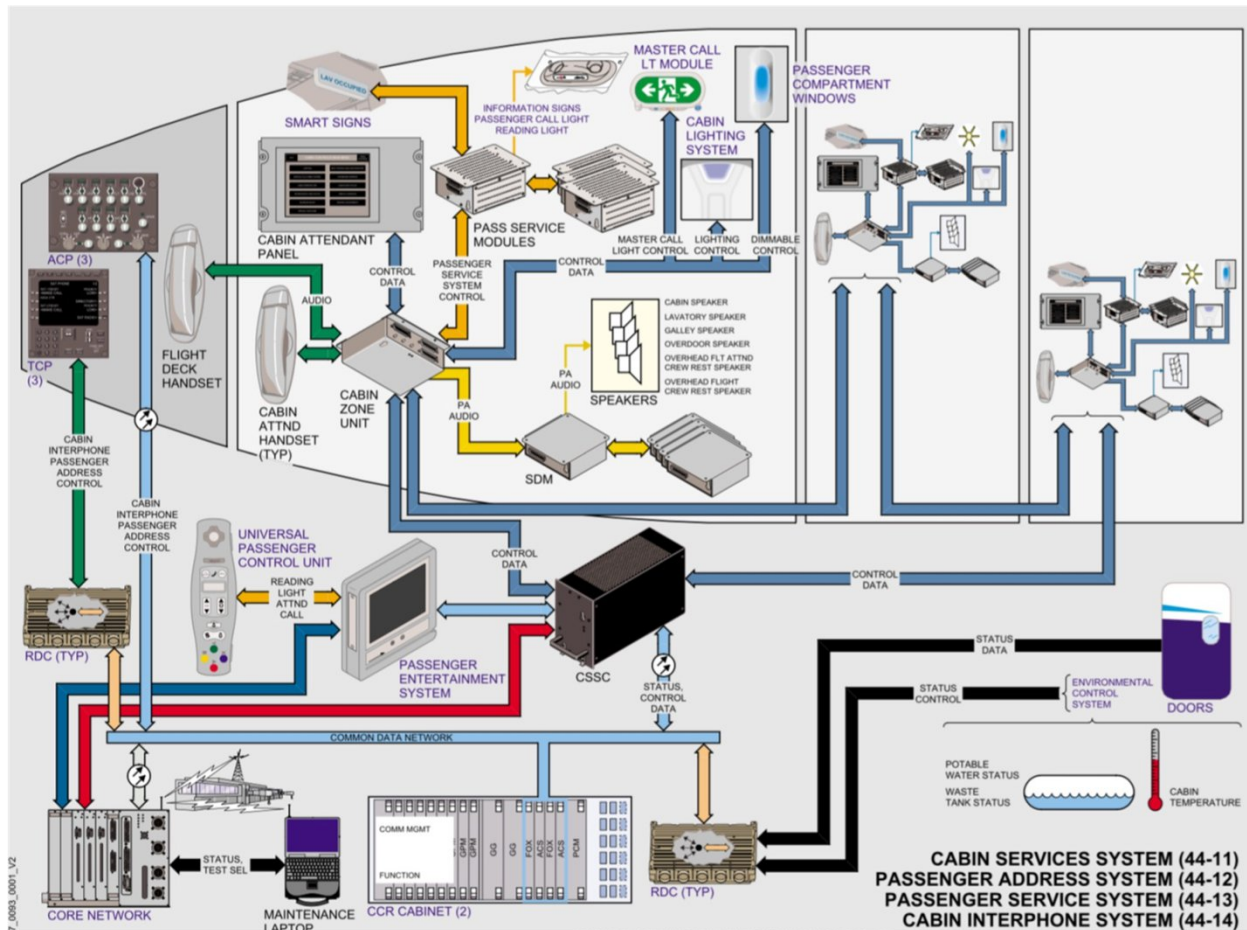
- o A: The CAP (Cabin Attendant Panel).
- o B: The SDU (Smart Display Unit).
- o C: The PCU (Passenger Control Unit).

756: (Q756) The information signs are controlled from the cabin configuration software inside the...
(See the figure)



- o A: Cabin Attendant Panel.
- o B: Cabin Services System Controller.
- o C: Passenger Control Unit.

757: (Q757) The seating and zones are controlled from the cabin configuration software inside the...
(See figure)



- o A: Cabin Services System Controller.
- o B: Cabin Attendant Panel.
- o C: Passenger Control Unit.

758: (Q758) Which item provides the aircraft crew access to configuration of the IFES, the capability of storing data, and access to passenger database?

- o A: the IFES File Server.
- o B: the IFES Crew Panel.
- o C: the IFES Advanced Master Control Unit (AMCU).

759: (Q759) Which item handles all of the on-demand applications available to passengers?

- o A: the IFES File Server.
- o B: the IFES Crew Panel.
- o C: the IFES Advanced Master Control Unit (AMCU).

760: (Q760) Which part of the avionics domain of the network server system gives a single way of communication, preventing malicious data coming going to the avionics domain?

- o A: ethernet gateway module.
- o B: open world diode.
- o C: secure communication interface.

761: (Q761) Switching from avionics to flight operation domain is the OIS (On board Information System) is done by....

- o A: OIT control device.
- o B: OIT side switches.
- o C: OIT Terminal processor unit.

762: (Q762) What is the main protocol of communication in the open world?

- o A: Ethernet.
- o B: ARINC 629.
- o C: ARINC 429.

763: (Q763) Data on the USB keys (for data loading) is stored under the ...

- o A: ARINC 429 format.
- o B: ARINC 615A format.
- o C: ARINC 629 format.

764: (Q764) Which system enables aircraft to be accurately tracked by air traffic controllers and other pilots without the need for conventional radar?

- o A: FANS (Future Air Navigation System).
- o B: Mode S transponder.
- o C: ADS-B (Automatic Dependent Surveillance Broadcast).

765: (Q765) Documentation (FCOM, MEL, AFM, CDL) is part of the ...

- o A: Communication & Cabin Domain.
- o B: Flight Operations Domain.
- o C: Avionics Domain.

766: (Q766) A pre-departure clearance or PDC is given to the pilots via....

- o A: an ACARS message.
- o B: the datalink system.
- o C: voice (from ATC).

767: (Q767) Recording capability of aircraft parameters is part of the ...

- o A: Communication & Cabin Domain.
- o B: Flight Operations Domain.
- o C: Avionics Domain.

768: (Q768) On which system are scheduled maintenance tasks shown when a time or cycle limit occurs in an airplane system?

- o A: on the multifunction displays, the electronic flight bags and the maintenance laptop.
- o B: on the maintenance laptop and the electronic flight bags.
- o C: only on the maintenance laptop.

769: (Q769) Which system (of the core network system) collects, correlates, stores and shows fault information for most airplane systems.

- o A: crew information system.
- o B: central maintenance computing function.
- o C: common data network (CDN).

770: (Q770) What will be shown when the fault tolerant system has a fault but has not generated a caution or a warning on the flight deck?

- o A: A maintenance memo.
- o B: A scheduled fault message.
- o C: A specific status message.

771: (Q771) Documentation for the IFE (In-Flight Entertainment) System is part of the...

- o A: Communication & Cabin Domain
- o B: Flight Operations Domain.
- o C: Avionics Domain

772: (Q772) A passenger with a laptop can access to e-mail and internet applications in the...

- o A: Avionics Domain.
- o B: Communication & Cabin Domain.
- o C: Flight Operations Domain.

773: (Q773) Which communication system let the flight crew request and obtain information about meteorological parameters (weather, wind, visibility, clouds,....)?

- o A: Automatic Dependent Surveillance Broadcast
- o B: ATIS (Automatic Terminal Information System).
- o C: FANS (Future Air Navigation Systems).

774: (Q774) All the last generation aircraft use flight control systems. The FMS is the most advanced system. It can be defined as a....

- o A: 3-axis Flight Management System.
- o B: management system optimized in the horizontal plane.
- o C: 2-axis Flight Management System.

775: (Q775) Which of the following instruments are flight instruments? 1. Air speed indicator. 2. Altimeter. 3. Gyro horizon. 4. Global navigation satellite system. 5. Inertial reference system.

- o A: 1, 3 and 5.
- o B: 1, 2 and 3.
- o C: 3, 4 and 5.

776: (Q776) A ventilation fan has shut-down due to an overheat condition. The crew can....

- o A: restart the fan immediately by resetting the control switch to 'off' and 'on' again.
- o B: not restart the fan in flight. Ground crew must reset the system first.
- o C: restart the fan after it has cooled down.

777: (Q777) 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 landing gear is not locked down.
- o C: the wheel speed is too high.

778: (Q778) 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: $1 + 2$
- o C: $1 + 3$