

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

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

2: (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.

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

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

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

5: (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): 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.

6: (Q583) In a servo-assisted altimeter, the secondary winding from the E-bar provides an electrical current direct to the:

- o (A): two phase motor.
- o (B): amplifier of the servomotor..
- o (C): capsule stack.

7: (Q41) How do the rotors turn on a co-axial rotor system?

- o (A): They counter-rotate on a common shaft.
- o (B): They counter-rotate on separate masts.
- o (C): Both rotate in the same direction on a common shaft.

8: (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): ... TERRAIN, TERRAIN ... followed by ... WHOOP WHOOP PULL UP ... (twice).
- o (B): ...SINK RATE, SINK RATE ... followed by ... WHOOP WHOOP PULL UP ... (twice).
- o (C): ... TOO LOW, TERRAIN ... (twice) followed by ... TOO LOW GEAR ... (twice).

9: (Q532) In a Frise aileron control system....

- o (A): the up-going aileron produces increased drag.
- o (B): the down-going aileron leading edge protrudes into the airflow.
- o (C): the up-going aileron moves through a greater angle than the down going aileron.

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

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

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

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

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

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

13: (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.

14: (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.

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

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

16: (Q769) Which system (of the core network system) collects, correlates, stores and shows fault information for most airplane systems.

- o (A): common data network (CDN).
- o (B): central maintenance computing function.
- o (C): crew information system.

17: (Q674) A FDR fitted to an aircraft of over 5700kgs after April 98 must record for:

- o (A): 60 minutes.
- o (B): 30 minutes.
- o (C): 25 hours.

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

- o (A): Carry more fuel.
- o (B): Keep the center of gravity as close as possible to the ideal position.
- o (C): Trim the aircraft so that there is no need for trimmable horizontal stabilizers.

19: (Q429) LNAV is an ...(1)..... input to the.....(2)..... channel using data from the ...(3).....

- o (A): (1) inner loop - (2) pitch - (3) ADC
- o (B): (1) outer loop - (2) roll - (3) FMC
- o (C): (1) outer loop - (2) pitch - (3) FMC

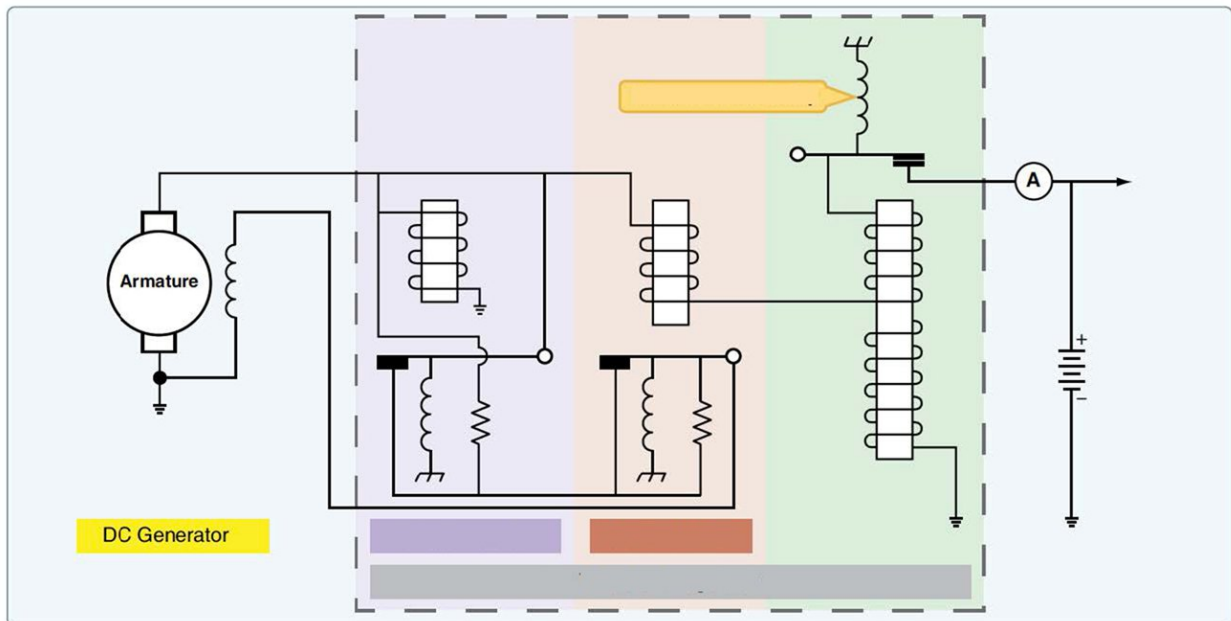
20: (Q480) Weather Radar returns show areas of precipitation in the following colors:

- o (A): Green, Magenta, Blue and Red.
- o (B): Green, Orange, Yellow and Red.
- o (C): Green, Yellow, Red and Magenta.

21: (Q659) The Ground Proximity Warning systems mode 1 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.

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

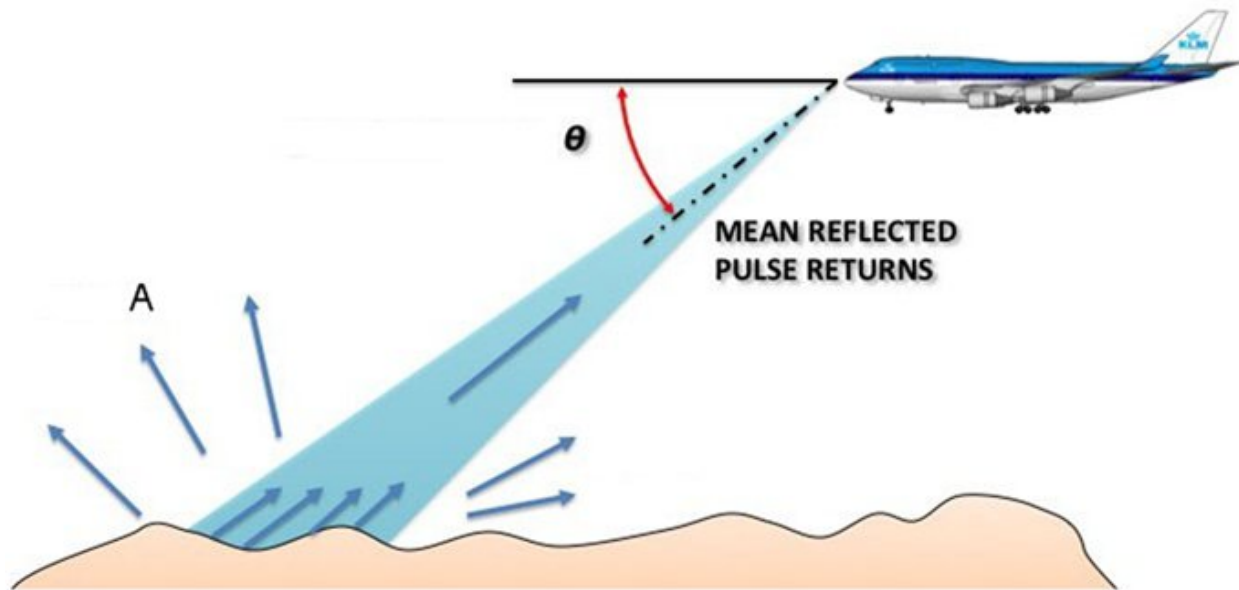


- o (A): Three-unit voltage regulator.
- o (B): Carbon pile voltage regulator.
- o (C): Reverse current delay.

- 23: (Q724) Waste water drain mast....
- o (A): are not heated.
 - o (B): are heated to a lower temperature with the aircraft on ground.
 - o (C): are heated to a high temperature in the air and on ground.
- 24: (Q52) In a monocoque structure, which component carries the majority of the loads?
- o (A): Longerons.
 - o (B): Skin.
 - o (C): Stringers.
- 25: (Q255) The emergency pressure control valve....
- o (A): is fitted to all pressurized aircraft.
 - o (B): is electrically controlled.
 - o (C): is not a very refined way of controlling.
- 26: (Q763) Data on the USB keys (for data loading) is stored under the ...
- o (A): ARINC 615A format.
 - o (B): ARINC 429 format.
 - o (C): ARINC 629 format.
- 27: (Q634) A force applied to the spinning axis of a gyro is precessed:
- o (A): through 90° in the direction of rotor spin.
 - o (B): through 90° in the direction of the force.
 - o (C): through an angle equivalent to $15.04^\circ \times \sin \lambda$ (latitude).
- 28: (Q319) What is the purpose of a mechanical sequence valve?
- o (A): ensure the correct operation of brake anti-skid units.
 - o (B): ensure the correct sequence of landing gears and doors.
 - o (C): ensure the correct function of safety switches.
- 29: (Q405) An automatic flight control system is fitted with control wheel steering (CWS)
- o (A): the autopilot must be disengaged before the pilot can input manoeuvring commands.
 - o (B): manoeuvring commands may be input by applying normal force to the control yoke without first disengaging the autopilot.
 - o (C): the CWS is only there for steering on the ground.
- 30: (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.
- 31: (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): Concentric.
 - o (B): Transverse.
 - o (C): Longitudinal.

- 32: (Q187) Emergency lighting is part of which service?
- o (A): Ground.
 - o (B): Essential.
 - o (C): Vital.
- 33: (Q330) What must you be aware of when testing pitot head heaters?
- o (A): They should be switched on for five minutes to allow to stabilise before taking ammeter readings.
 - o (B): They can only be checked by noting the rate of temperature rise of the probe.
 - o (C): They must only be switched on for the minimum time required to check serviceability.
- 34: (Q613) Static ports are usually fitted to both sides of the aircraft fuselage. This will:
- o (A): balance out errors caused by side slipping or yawing.
 - o (B): enable a greater number of instruments to be fitted.
 - o (C): reduce the position error.
- 35: (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.
- 36: (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 excessive height loss is experienced after take-off during go-around.
 - o (C): An unsafe clearance situation is experienced, with the aircraft not in the landing configuration.
- 37: (Q533) When an aircraft fitted with spoilers is rolled to the left, what is the movement of those spoilers?
- o (A): Right spoiler is deflected down.
 - o (B): Left spoiler is deflected up and the right down.
 - o (C): Left spoiler is deflected up.
- 38: (Q609) When the moisture separator is purged in a pneumatic system, it dumps
- o (A): just the moisture trap.
 - o (B): the system between vacuum pump and regulator valve.
 - o (C): the whole system.
- 39: (Q557) When does a stick-shaker comes into operation? When the aircraft....
- o (A): goes supersonic.
 - o (B): is approaching the 'critical mach number'.
 - o (C): is approaching a stall.
- 40: (Q388) Coordinated autopilot turns are achieved by
- o (A): aileron to elevator crossfeed.
 - o (B): aileron to rudder crossfeed.
 - o (C): yaw rate gyro signals.

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



- (A): Scattered waves.
- (B): Depression waves.
- (C): Deflected waves.

42: (Q540) Active load control involves....

- (A): operating control surfaces in an unconventional manner.
- (B): intervention & monitoring the human pilot.
- (C): limiting the deflection of control surface with airspeed.

43: (Q479) A mode C transponder

- (A): can be used for TCAS II.
- (B): cannot be used for TCAS II.
- (C): can be used for TCAS on ILS approach only.

44: (Q69) The relationship between the electric field and the magnetic field in a dipole or monopole antenna are....

- (A): in phase.
- (B): in phase on a monopole and out of phase in a dipole.
- (C): out of phase by 90° .

45: (Q432) The fixed trim tab....

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

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

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

- 47: (Q660) The Ground Proximity Warning systems mode 2 is activated when
- o (A): The aircraft is flying into rising terrain.
 - o (B): An excessive height loss is experienced after take-off during go-around.
 - o (C): The barometric descent rate is excessive with respect to the aircraft height above the terrain.
- 48: (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.
- 49: (Q346) In an anti-skid system ...
- o (A): brakes are modulated to give most efficient braking.
 - o (B): brakes release on rising torque.
 - o (C): brakes release on falling torque.
- 50: (Q154) What is the pseudo-random code used by all civilian GPS users?
- o (A): the P code.
 - o (B): the C/A code.
 - o (C): the Y code.
- 51: (Q535) What happens when you move the aileron control to the right?
- o (A): the right aileron moves down and the left up.
 - o (B): the right aileron moves up and the left down.
 - o (C): the right elevator goes up and the left down.
- 52: (Q498) An ARINC 429 binary coded decimal data word occupies bits
- o (A): 1 to 8
 - o (B): 11 to 29
 - o (C): 11 to 28
- 53: (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).
- 54: (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 the main battery is discharged.
 - o (C): Automatically when both main AC buses lose power.
- 55: (Q611) A static port is used to measure:
- o (A): atmospheric pressure.
 - o (B): dynamic pressure minus pitot pressure.
 - o (C): dynamic pressure plus pitot pressure.
- 56: (Q558) What is the effect of a single failure of a fly-by-wire system?
- o (A): It has no effect on the aircraft's operation.

- o (B): It will reduce the operational height and speed.
- o (C): It will limit the flight profile.

57: (Q522) The capacity of the emergency batteries are capable of providing emergency lighting for a period of at least ...

- o (A): 1 hour.
- o (B): 1 minute.
- o (C): 10 minutes.

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

59: (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.

60: (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.

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

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

62: (Q449) During an automatic landing, the aircraft descent rate is sensed by

- o (A): vertical accelerometers.
- o (B): pitch rate gyros.
- o (C): radio altimeters.

63: (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.

64: (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.

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

- o (A): engine bleed air or blower air.

- o (B): ambient ram air.
- o (C): air bled from the main cabin supply duct.

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

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

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

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

68: (Q24) Aerodynamic speeds vary all the way from low subsonic to hypersonic. The limits of transonic speed range are

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

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

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

70: (Q630) In a capacitive fuel gauging system an increase in fuel level would:

- o (A): decrease capacitance.
- o (B): increase capacitance.
- o (C): increase capacitive reactance.

71: (Q519) The Doppler Navigation System is based on....

- o (A): pulse shift transmission.
- o (B): radio waves refraction in the ionosphere.
- o (C): radar principles using frequency shift.

72: (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): a caution.
- o (C): alert message.

73: (Q707) Access to the Central Maintenance Computers is through....

- o (A): the line select keys on the CDU.
- o (B): a press-to-test switch on the computer itself.
- o (C): a control box.

74: (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.

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

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

76: (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.

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

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

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

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

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

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

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

- o (A): produce a coordinated turn.
- o (B): assist the aerodynamic response.
- o (C): block the Dutch roll frequency.

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

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

82: (Q624) A thermocouple can be made of:

- o (A): 'two metal conductors of different nature fixed together at two points.'
- o (B): two metal conductors of the same nature fixed together at two points.
- o (C): a three wire coil.

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

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

- o (C): remains the same as the flight altitude.
- 84: (Q450) Overshoot or go-around mode can be initiated....
- o (A): only when autopilot is engaged.
 - o (B): at any time.
 - o (C): below 2000 feet radio altitude.
- 85: (Q776) A ventilation fan has shut-down due to an overheat condition. The crew can....
- o (A): restart the fan after it has cooled down.
 - o (B): not restart the fan in flight. Ground crew must reset the system first.
 - o (C): restart the fan immediately by resetting the control switch to 'off' and 'on' again.
- 86: (Q400) With airspeed hold engaged, Flight Director engaged, a down command means your speed....
- o (A): keeps the same.
 - o (B): has decreased.
 - o (C): has increased.
- 87: (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.
- 88: (Q303) What is the purpose of a check valve?
- o (A): prevents pump cavitation.
 - o (B): allows fluid to flow only in one direction.
 - o (C): prevents overpressure.
- 89: (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 fixed points is the same.
 - o (C): of distance between two lines is different.
- 90: (Q382) A single axis autopilot system provides....
- o (A): control about the pitch axis.
 - o (B): stabilisation about the normal axis.
 - o (C): control about the roll axis.
- 91: (Q512) Hyperbolic navigation systems determine present position from the intersection of....
- o (A): GPS satellite intersection.
 - o (B): longitudinal magnetic field lines.
 - o (C): lines of position.
- 92: (Q261) What type of smoke detector contains radioactive material?
- o (A): Ionizing smoke detectors.
 - o (B): Photo-electric smoke detectors.
 - o (C): Carbon monoxide detectors.

93: (Q768) On which system are scheduled maintenance tasks shown when a time or cycle limit occurs in an airplane system?

- o (A): only on the maintenance laptop.
- o (B): on the maintenance laptop and the electronic flight bags.
- o (C): on the multifunction displays, the electronic flight bags and the maintenance laptop.

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

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

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

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

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

97: (Q385) An automatic flight control system:

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

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

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

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

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

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

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

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

- o (A): series connected servo motors.
- o (B): INS inputs to the CADDC.
- o (C): a three axis autopilot system.

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

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

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

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

104: (Q354) Cabin chemical oxygen generators are located in?

- o (A): The cargo hold.
- o (B): The overhead bins.
- o (C): The passenger service units.

105: (Q19) A wing slat is a movable airfoil attached to the leading edge of high-performance airplane wings. What is their purpose?

- o (A): replace flaps.
- o (B): reduce stalling speed.
- o (C): act as a dive brake or speed brake.

106: (Q762) What is the main protocol of communication in the open world?

- o (A): ARINC 429.
- o (B): ARINC 629.
- o (C): Ethernet.

107: (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): 2, 4, 5.
- o (B): 1, 3.
- o (C): 1, 3, 4.

108: (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.

109: (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): Some bleed air systems will use only the low pressure stage, others will use the high stage.
- o (C): If the low pressure stage supply fails, the high stage takes over.

110: (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): 720 - 25 kHz

- o (B): 2280 - 50 kHz
- o (C): 360 - 8.33 kHz

111: (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.

112: (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): more than 3° per second.
- o (C): 3° per second.

113: (Q44) The primary purpose of the tail rotor is

- o (A): to counteract torque.
- o (B): to give lateral stability.
- o (C): to give directional control.

114: (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): Longitudinal.
- o (B): Concentric.
- o (C): Transverse.

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

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

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

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

117: (Q544) What will an extended fowler flap increase?

- o (A): Wing area and aspect ratio.
- o (B): Wing area.
- o (C): Wing area and camber.

118: (Q633) The degree of rigidity of a gyro depends on:

- o (A): The rotor speed only.
- o (B): The rotor speed and weight distribution.
- o (C): The rotor weight only.

119: (Q574) Which instruments are connected to the aircraft pitot-static system?

- o (A): turn-and-slip indicator, airspeed indicator and directional gyro (air operated).

- o (B): vertical speed indicator, altimeter and airspeed indicator.
- o (C): turn coordinator, cabin altimeter and cabin rate-of-change indicator.

120: (Q226) What supplies in a turbo fan cold air system, the heat exchanger cooling air?

- o (A): Fan drawn ambient air.
- o (B): Air bled from cabin air supply duct.
- o (C): Air bled directly from engine or through blower.

121: (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.

122: (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, 3 and 4.
- o (B): 1, 2 and 4.
- o (C): 2, 3 and 4.

123: (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): 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.

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

- o (A): Priority 1.
- o (B): Priority 5.
- o (C): Priority 2.

125: (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 AMCU (Advanced Master Control Unit).
- o (B): The FS (file server).
- o (C): The ADB (Area Distribution Box).

126: (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): 3 and 4.
- o (C): 1, 3 and 4.

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

- o (A): ensure all control surfaces are unobstructed.

- o (B): switch off all power.
- o (C): switch on NAV receivers.

128: (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

129: (Q710) Data loading is a....

- o (A): writing information facility.
- o (B): reading information facility.
- o (C): reading or writing information facility.

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

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

131: (Q430) The flight director is displayed on the....

- o (A): EHSI
- o (B): EADI
- o (C): bearing indicator

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

- o (A): Twisted pair wires.
- o (B): Infrared wires.
- o (C): Glass fiber connection.

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

- o (A): Tuck under.
- o (B): Spiral dive.
- o (C): Dutch roll.

134: (Q29) To increase critical Mach number

- o (A): tailerons are fitted.
- o (B): elevons are fitted.
- o (C): the wings are swept.

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

- o (A): the runway localiser.
- o (B): the area navigation system.
- o (C): the airfield marker beacon.

136: (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.

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

- o (A): Alpha radiation.
- o (B): ultraviolet radiation.
- o (C): cosmic radiation.

138: (Q684) With an EFIS flight director using IRS guidance, reference north can be:

- o (A): magnetic north only.
- o (B): true north between 73°N and 65°S and magnetic north above these latitudes.
- o (C): magnetic north between 73°N and 65°S and true north above these latitudes.

139: (Q752) The external communication (IFE) system provides communication with the aircraft while grounded through ...

- o (A): a cell modem component and a terminal receiving station..
- o (B): an ethernet connection in the aircraft.
- o (C): a cell modem component and an antenna located in the aircraft.

140: (Q234)Conditioned air is...

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

141: (Q131) A conventional VOR....

- o (A): has an AM reference signal and a FM variable signal.
- o (B): has an FM reference signal and an AM variable signal.
- o (C): has an AM reference signal and a 150 Hz variable signal.

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

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

143: (Q539) The purpose of a trim tab (device) is to....

- o (A): reduce or to cancel control forces.
- o (B): to assist in steering commands.
- o (C): trim the airplane at low airspeed.

144: (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.

145: (Q607) An Air Data Computer (ADC):

- o (A): Transforms air data measurements into electric impulses driving servo motors in instruments.
- o (B): Measures position error in the static system and transmits this information to ATC to provide correct altitude reporting.
- o (C): Is an auxiliary system that provides altitude information in the event that the static source is blocked.

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

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

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

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

148: (Q542) Where are the gust suppression pressure transducers located? On both sides of...

- o (A): the horizontal stabilizer to measure the pressure differences between the bottom and top side of the stabilizer.
- o (B): the aircraft (nose and tail) to measure the pressure differences between the nose and tail (slip).
- o (C): the vertical stabilizer to measure the pressure differences between the sides of the tail.

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

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

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

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

151: (Q632) The compensator in a fuel tank measures....

- o (A): specific gravity of fuel.
- o (B): fuel quantity.
- o (C): capacitance of fuel transmitter.

152: (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.

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

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

154: (Q599) The Machmeter has two capsules:

- o (A): one responds to altitude, the other to density.
- o (B): 'one responds to airspeed, the other to the local speed of sound.'
- o (C): one responds to altitude, the other to airspeed.

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

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

156: (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.

157: (Q38) What prevents the rotor blades from 'folding up' during rotation?

- o (A): the centrifugal force.
- o (B): the lift force.
- o (C): the weight.

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

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

159: (Q680) This amber symbol appears in place of the normal altitude display when: (See the figure)



- o (A): the selected radio altitude has been reached.
- o (B): there is a failure of the radio altimeter.
- o (C): the radio altitude needs re-setting on the EHSI.

160: (Q392) With the autopilot engaged in the ALT mode the Captain alters the barometric setting. The aircraft:

- o (A): maintains its altitude.
- o (B): changes its altitude in accordance with the change in pressure setting.
- o (C): trips out of altitude hold.

161: (Q699) When a stall warning occurs, the angle of attack vane....

- o (A): moves aft.
- o (B): moves down.
- o (C): moves up.

162: (Q454) If during autoland the LOC signal is lost at 400 ft in final approach

- o (A): system degrade to CAT II.
- o (B): go-around is initiated.
- o (C): autoland is continued.

163: (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): 2, 3 and 5.
- o (B): 1 and 4.
- o (C): 3, 4 and 5.

164: (Q673) The Flight Data Recorder actually starts running:

- o (A): when a/c lines up on runway.
- o (B): before the a/c starts moving under its own power.
- o (C): at the beginning of the T/O run.

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

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

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

- o (A): helium gas.
- o (B): nitrogen gas.
- o (C): air.

167: (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.

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

- o (A): Equal deflection lateral control surfaces.
- o (B): A smaller fin.
- o (C): Differential ailerons.

169: (Q350) Inadvertent retraction of an electronically controlled landing gear on the ground is....

- o (A): not possible because the system is not powerful enough.
- o (B): prevented by the ground/air logic system.
- o (C): always a danger after the ground locks have been removed.

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

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

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

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

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

- o (A): pitch, roll and yaw axes.
- o (B): pitch and roll axes only.
- o (C): pitch axis only.

173: (Q747) Which discretess provides the PSEU (Proximity Switch Electronics Unit) to the IFES SC (In-Flight Entertainment System Controller)?

- o (A): Air/ground discrete; parking brake discrete; start take-off roll discrete; nose landing gear discrete.
- o (B): Air/ground discrete; IRS (Inertial Reference System) position discrete; ADC (Air Data Computer) discretess (Airspeed, Ground speed, Mach number, altitude).
- o (C): Air/ground discrete; air speed discrete; altitude discrete, GPS position discrete.

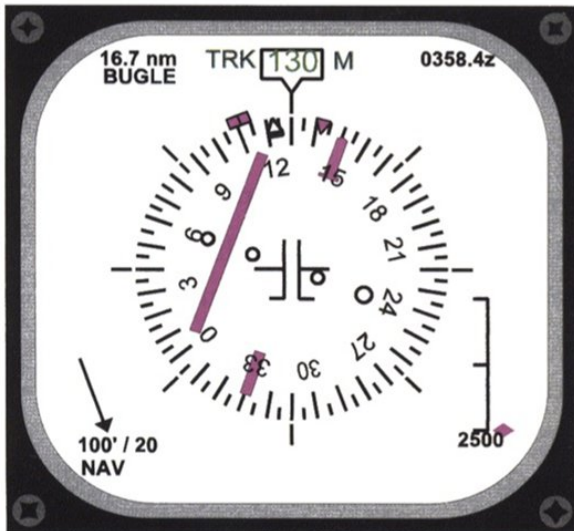
174: (Q332) On large transport aircraft, the windshield wiper system is....

- o (A): independent on each side with different power sources.
- o (B): independent on each side but with the same power source.
- o (C): one system for both sides but with the same power source.

175: (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 wings.
- o (C): In the nose landing gear bay.

176: (Q677) The displays marked A, B, C and D are respectively: (See the figure)



A



B



C



D

- o (A): A. VOR - B. ILS - C. NAV - D. Plan
- o (B): A. NAV - B. PLAN - C. VOR - D. ILS
- o (C): A. MAP - B. VOR - C. ILS - D. Plan

177: (Q550) What are ground spoilers used for?

- o (A): To assist the aircraft when go around is selected on ground.
- o (B): To dump lift.
- o (C): For steering commands while taxiing.

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

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

- o (C): C/A code and P (precision) code.
- 179: (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): no flow, jack is stationary.
 - o (C): flow, but no movement.
- 180: (Q412) A triplex system loses one channel, the pilot....
- o (A): can continue with autoland.
 - o (B): must make a full manual approach and land.
 - o (C): can use auto approach only.
- 181: (Q423) The flare manoeuvre may be controlled by signals from
- o (A): the localiser receiver.
 - o (B): the glide slope receiver.
 - o (C): radio altimeter.
- 182: (Q398) The two parameters used for category aircraft classification are....
- o (A): localiser and glideslope.
 - o (B): radio height/runway visual range.
 - o (C): decision height and runway visual range.
- 183: (Q66) What is used to protect the nose radome from lightning strikes?
- o (A): Bonding wire.
 - o (B): The radome is composite material and does not require a special lightning protection.
 - o (C): Lightning diverter strips.
- 184: (Q327) The inflatable tube of the de-icer boots is made of ...
- o (A): natural rubber.
 - o (B): synthetic rubber.
 - o (C): rubberised fabric.
- 185: (Q461) During autoland all autopilot channels will disconnect in....
- o (A): duplex system.
 - o (B): triplex system.
 - o (C): dual-dual system.
- 186: (Q191) Which formula represents the transformer ratio?
- o (A): $V_2 / N_2 = V_1 / N_1$
 - o (B): $V_2 / V_1 = N_2 / N_1$
 - o (C): $V_2 \times V_1 = N_2 \times N_1$
- 187: (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): fall to zero.
 - o (C): be practically unaffected.
- 188: (Q504) ACARS messages are sent from the aircraft via (A):

- o (A): GNSS.
- o (B): a VHF communication transceiver.
- o (C): an UHF communication transceiver.

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

- o (A): as a stand-alone system.
- o (B): in parallel with the autopilot pitch control servo.
- o (C): in series with the autopilot pitch control servo.

190: (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 gimbals 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.

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

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

192: (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 clockwise, indicating an apparent turn towards North.
- o (C): Turn anti-clockwise, indicating an apparent turn towards South.

193: (Q268) How is avionics smoke detected?

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

194: (Q43) How does collective control input affect the pitch of the blades?

- o (A): increases the angle on the retreating blade and reduces it on the advancing one.
- o (B): increases the pitch angle the same amount on all blades.
- o (C): increases the angle on the advancing blade and reduces it on the retreating one.

195: (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) torqued - (2) opposite - (3) primary precessed.
- o (B): (1) secondary - (2) opposite - (3) primary precessed.
- o (C): (1) secondary - (2) equal - (3) primary applied.

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

- o (A): Stratosphere.
- o (B): Troposphere.
- o (C): Ionosphere.

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

- o (A): 8800 MHz.
- o (B): 9.375 GHz.
- o (C): 1213 MHz.

198: (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): When the aircraft is significantly below its ILS glidepath.
- o (C): An excessive height loss is experienced after take-off during go-around.

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

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

200: (Q501) ARINC 629 data bus is

- o (A): one bus, bi-directional data flow.
- o (B): two buses, bi-directional data flow.
- o (C): two buses, unidirectional.

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

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

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

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

203: (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): 126 ft
- o (B): 276 ft
- o (C): 150 ft

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

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

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

- o (A): a receiver.

- o (B): an antenna.
- o (C): a delay time.

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

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

207: (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): Hertz.
- o (B): Marconi.
- o (C): Quarter-wave.

208: (Q395) The GA mode is usually initiated by....

- o (A): pressing a button on the autopilot control panel.
- o (B): pressing a button on thrust levers.
- o (C): making a selection on the mode control panel.

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

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

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

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

211: (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 is indicated and the slip is zero.
- o (C): the turn pointer and slip indicator are displaced on the same side.

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

- o (A): maintain level flight.
- o (B): allow full authority to be regained by the aileron.
- o (C): prevent loads on the elevator trims.

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

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

214: (Q767) Recording capability of aircraft parameters is part of the ...

- o (A): Avionics Domain.
- o (B): Communication & Cabin Domain.
- o (C): Flight Operations Domain.

215: (Q714) Information updates to the airborne system and communications between the ground based and airborne systems are accomplished ...

- o (A): through the Gate-link concept.
- o (B): automatically by update from the ECAM.
- o (C): by an aircraft engineer updating the system either by a floppy disc, a CD or even a hard disk.

216: (Q541) Which control surfaces may be used by active load control?

- o (A): Elevator and stab.
- o (B): Elevator and aileron.
- o (C): Aileron and spoiler.

217: (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): both move up.
- o (C): remain stationary.

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

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

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

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

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

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

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

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

222: (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): 1, 2.

- o (B): 2, 4.
- o (C): 2, 3.

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

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

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

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

225: (Q127) What is the colour sequence when passing over an Outer, Middle and Inner Marker beacon?

- o (A): blue - green - white
- o (B): blue - amber(yellow) - white
- o (C): amber(yellow) - white - green

226: (Q335) What does a green/grey spot marking on aircraft tyre casing represent?

- o (A): Military reference.
- o (B): Leak holes.
- o (C): The light part of the tyre.

227: (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.

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

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

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

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

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

231: (Q549) In a turn, wing spoilers may be deployed....

- o (A): to act as an airbrake, interacting with the ailerons.
 - o (B): to assist the up going aileron.
 - o (C): in unison with both the up going and down going ailerons.
- 232: (Q717) Information to be printed is sent to the printer ...
- o (A): from the FMC (Flight Management Computer).
 - o (B): from the CMC (Central Maintenance Computer).
 - o (C): from the CDU (Control Display Unit).
- 233: (Q488) Modern low altitude radio altimeters emit waves in the following frequency band:
- o (A): UHF (Ultra High Frequency).
 - o (B): SHF (Super High Frequency).
 - o (C): HF (High Frequency).
- 234: (Q171) What type of generator / alternator is used in a variable speed constant frequency system?
- o (A): Brushless alternator.
 - o (B): DC alternator.
 - o (C): DC generator.
- 235: (Q548) Which device is used to dump lift?
- o (A): trailing edge flaps.
 - o (B): leading edge flaps.
 - o (C): spoiler.
- 236: (Q1) About which axis does rolling occur?
- o (A): vertical axis.
 - o (B): longitudinal axis.
 - o (C): lateral axis.
- 237: (Q237) What determines the effective temperature of a cabin?
- o (A): Temperature and humidity.
 - o (B): Temperature only.
 - o (C): Temperature, humidity, thermal inertia and heat load.
- 238: (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).
- 239: (Q133) Bearing information in an ADF system is....
- o (A): measured and calculated by the ADF system.
 - o (B): received by the antenna.
 - o (C): provided by the flight management system.
- 240: (Q729) An airborne Ethernet electrical cable (AFDX) is
- o (A): equipped with 4 pins Quadrx connectors.
 - o (B): equipped with 8 pins RJ45 connectors.

- o (C): equipped with 4 pins RJ45 connectors.
- 241: (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.
- 242: (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 CDU (Control Display Unit).
 - o (B): the Electronic library system.
 - o (C): the Flight Data Recorder.
- 243: (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.
- 244: (Q372) How is pneumatic leak detection done?
- o (A): Thermocouples.
 - o (B): Thermal switches.
 - o (C): Pressure sensors.
- 245: (Q42) Which movement can each individual blade of a semi-rigid rotor system make independently?
- o (A): flap and change pitch.
 - o (B): flap only.
 - o (C): flap, change pitch and drag.
- 246: (Q399) What is the controlling factor in the automatic flare mode?
- o (A): Decision height.
 - o (B): Localizer signal.
 - o (C): Radio altimeter.
- 247: (Q547) Spoilers are speed brakes. Where can other speed brakes be located?
- o (A): Rear of the Fuselage.
 - o (B): Under the Fuselage.
 - o (C): On the wing.
- 248: (Q105) The mode of operation of the VHF comms transceiver is
- o (A): single channel duplex.
 - o (B): single channel simplex.
 - o (C): double channel duplex.
- 249: (Q759) Which item handles all of the on-demand applications available to passengers?
- o (A): the IFES File Server.
 - o (B): the IFES Advanced Master Control Unit (AMCU).
 - o (C): the IFES Crew Panel.

250: (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

251: (Q754) Which unit gathers information for proximity sensors to determine the flight phase and sends discrettes to the System Controller to provide it with flight phase information for the passengers?

- o (A): The FMS (Flight Management System).
- o (B): The INS (Inertial Navigation System) or IRS (Inertial Reference system).
- o (C): The PSEU (Proximity Switch Electronics Unit).

252: (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.

253: (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.

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

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

255: (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.

256: (Q507) Which one of the following methods is used by a Microwave Landing System (MLS) to indicate distance from the runway threshold?

- o (A): Measurement of the frequency shift between the MLS azimuth and elevation transmissions.
- o (B): A DME co-located with the MLS transmitters.
- o (C): Timing the interval between the reception of sequential secondary radar pulses from the MLS station to the aircraft.

257: (Q605) An air data computer (ADC) obtains altitude from....

- o (A): GPS Satellite.
- o (B): Barometric data from static source.
- o (C): Radio Altimeter.

258: (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.

259: (Q589) The VSI-case is fed with .(1)..... pressure and the capsule with ..(2)..... pressure.

- o (A): (1) static - (2) static
- o (B): (1) static - (2) pitot
- o (C): (1) pitot - (2) static

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

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

261: (Q309) What is the reason for pressurizing the hydraulic reservoirs?

- o (A): maintain a constant fluid level.
- o (B): minimize the possibility of pump cavitation.
- o (C): provide a reserve of stored energy.

262: (Q73) What is the major advantage of the telegraph over earlier methods of communication?

- o (A): Larger messages.
- o (B): Range and speed.
- o (C): Security.

263: (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.

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

- o (A): attitude of aircraft.
- o (B): rate of yaw.
- o (C): amount of aircraft disturbance.

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

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

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

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

267: (Q701) In an engine vibration monitoring system for a turbojet any vibration produced by the engine is:

- o (A): amplified and filtered before being fed to the cockpit indicator.

- o (B): inversely proportional to engine speed.
- o (C): fed directly to the cockpit indicator without amplification or filtering.

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

- o (A): Alter the display presentation.
- o (B): Alter the transmitter power.
- o (C): Alter the video amplifier.

269: (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.

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

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

271: (Q134) Every dot on the localizer deviation scale is....

- o (A): 5 nm from center line
- o (B): 10 nm from center line
- o (C): 1 nm from center line

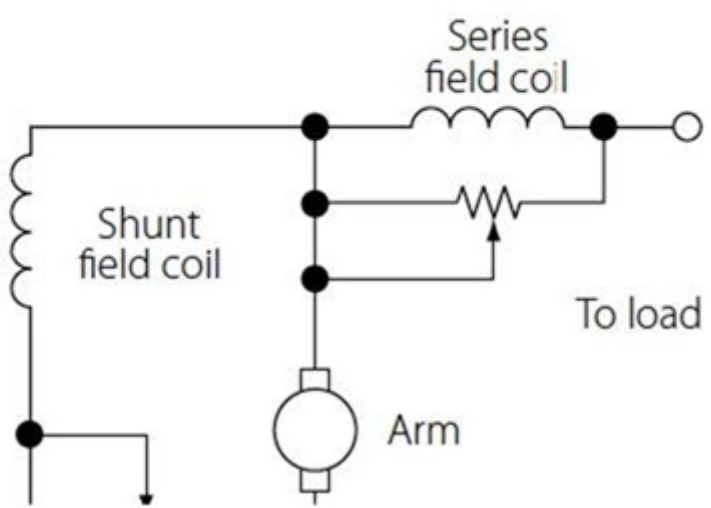
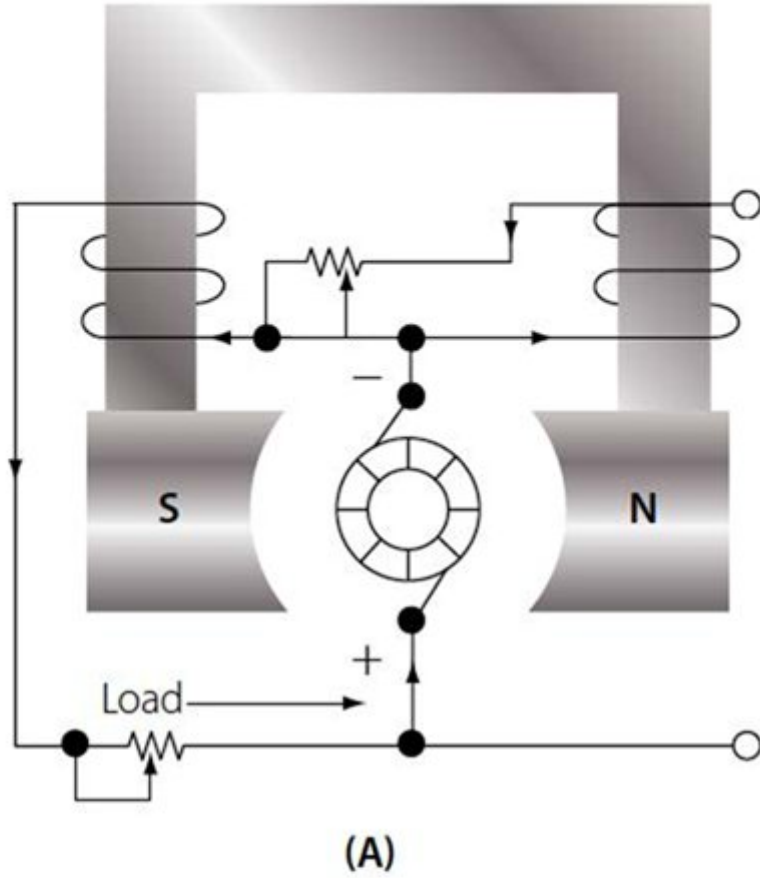
272: (Q452) Which is the correct sequence for an autoland?

- o (A): Localiser capture, glideslope capture, attitude hold and flare.
- o (B): Localiser capture, glideslope capture, flare and attitude hold.
- o (C): Glideslope capture, altitude hold and flare.

273: (Q32) The tail rotor

- o (A): is not subject to dissymmetry of lift.
- o (B): produces a force in the same direction as torque reaction.
- o (C): produces a force opposing torque reaction.

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



- (A): Series wound generator.
- (B): Parallel wound generator.
- (C): Compound wound generator.

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

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

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

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

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

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

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

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

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

280: (Q749) The inflight entertainment equipment is connected to ...

- o (A): the IDN (Isolated Data Network) of the Core network system.
- o (B): its own network system, completely isolated from the Core network system.
- o (C): the ODN (Open Data Network) of the Core network system.

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

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

282: (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.

283: (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.

284: (Q661) The Ground Proximity Warning systems mode 3 is activated when

- o (A): The barometric descent rate is excessive with respect to the aircraft height above the terrain.

- o (B): The aircraft is flying into rising terrain.
 - o (C): An excessive height loss is experienced after take-off during go-around.
- 285: (Q166) What is the purpose of a rectifier?
- o (A): Convert the DC output into AC.
 - o (B): Control the output voltage of a parallel wound generator.
 - o (C): Convert the AC output to DC.
- 286: (Q198) On a large commercial aircraft, which bus will be powered as soon as external power is connected?
- o (A): The external power bus.
 - o (B): Battery bus.
 - o (C): The ground handling bus.
- 287: (Q621) The white sector of the arc of a temperature gauge corresponds to:
- o (A): an exceptional operating range.
 - o (B): a special operating range.
 - o (C): a normal operating range.
- 288: (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.
- 289: (Q636) The gyro mass is concentrated at its edge to....
- o (A): relieve bearing wear.
 - o (B): increase its speed of rotation.
 - o (C): increase its rigidity.
- 290: (Q287) On Large transport aircraft fuel is delivered to each engine using ...
- o (A): a parallel system.
 - o (B): a separate system for each engine.
 - o (C): the same system for each engine.
- 291: (Q45) Which control input must be used to lift the helicopter vertically into the hover?
- o (A): collective pitch lever has to be raised.
 - o (B): cyclic pitch lever has to be raised.
 - o (C): collective pitch lever has to be lowered.
- 292: (Q485) A false indication of water may be given by the AWR display when:
- o (A): flying over land with the Land/Sea switch in the Sea position.
 - o (B): there is cloud and precipitation between the aircraft and a cloud target.
 - o (C): flying over mountainous terrain.
- 293: (Q125) The BFO (Beat Frequency Oscillator) selector on an ADF receiver is used to....
- o (A): hear the IDENT of some NDB stations radiating a continuous wave signal.
 - o (B): find the loop 'null' position.
 - o (C): display the ident on display.

294: (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.

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

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

296: (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.

297: (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): the inboard and outboard ailerons are active.
- o (B): only the outboard ailerons are active.
- o (C): only the inboard ailerons are active.

298: (Q685) Mode available for (EFIS) HSI on some units are:

- o (A): VOR, ILS, MAP and AUTO TRIM.
- o (B): MAP and PLAN.
- o (C): Airspeed and Mach.

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

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

300: (Q734) The core network system has ...

- o (A): an open data network and an isolated data network.
- o (B): an open data network, an isolated data network and an avionics network.
- o (C): an ethernet network and an crew information network.

301: (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): 1,2,3,4.
- o (B): 1,2,4.
- o (C): 1, 2.

302: (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 vertical plane only.
- o (B): the intruder relative position and possibly an indication of a collision avoidance manoeuvre within the horizontal plane only.

- o (C): a simple intruding airplane proximity warning..
- 303: (Q132) In an ADF system, night effect is most pronounced:
- o (A): during long winter nights.
 - o (B): when the aircraft is at high altitude.
 - o (C): at dusk and dawn.
- 304: (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): Current transformers always have a square transformer core.
 - o (C): The secondary winding should never be left open when in operation.
- 305: (Q772) A passenger with a laptop can access to e-mail and internet applications in the...
- o (A): Communication & Cabin Domain.
 - o (B): Avionics Domain.
 - o (C): Flight Operations Domain.
- 306: (Q176) In which type of unit can a permanent magnet generator (PMG) be found?
- o (A): Brushless AC alternator.
 - o (B): DC generator.
 - o (C): DC alternator.
- 307: (Q207) Which statement is true?
- o (A): When operating the external emergency light switch both internal and external lights come on.
 - o (B): When the internal emergency light switch is used both internal and external emergency light come on.
 - o (C): Operating the internal emergency light switch only turns on the internal emergency lights.
- 308: (Q274) How can you determine if the lavatory fire bottle has been discharged?
- o (A): By reading the pressure gauge on the bottle.
 - o (B): By weighing it.
 - o (C): By the temperature indicator strip.
- 309: (Q646) When turning right onto the runway prior to take-off, the ball on the turn and bank indicator will:
- o (A): stay central in the turn.
 - o (B): move to the left.
 - o (C): move to the right.
- 310: (Q709) Where is the loaded software held?
- o (A): In a centralized maintenance cabinet, ready to be send and reinstalled should something happen that corrupts a particular program.
 - o (B): CMC (Central Maintenance Computer) storage device, ready to be reinstalled should something happen that corrupts a particular program.
 - o (C): On the flight deck, ready to be reinstalled should something happen that corrupts a particular program.
- 311: (Q670) The purpose of fitting an expansion unit to a direct reading compass is to....

- o (A): compensate for expansion/contraction of the liquid.
- o (B): minimize liquid swirl.
- o (C): compensate for leaks in the system.

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

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

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

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

314: (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.

315: (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 Advanced Master Control Unit (AMCU).
- o (B): the IFES File Server.
- o (C): the IFES Crew Panel.

316: (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.

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

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

318: (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 + 3
- o (B): 1 + 2 + 3
- o (C): 1 + 2

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

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

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

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

321: (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.

322: (Q764) Which system enables aircraft to be accurately tracked by air traffic controllers and other pilots without the need for conventional radar?

- o (A): ADS-B (Automatic Dependent Surveillance Broadcast).
- o (B): Mode S transponder.
- o (C): FANS (Future Air Navigation System).

323: (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 and 6.
- o (B): 3, 4, 5 and 6.
- o (C): 1, 2, 5 and 6.

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

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

325: (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 3.
- o (B): 1 and 4.
- o (C): 2 and 3.

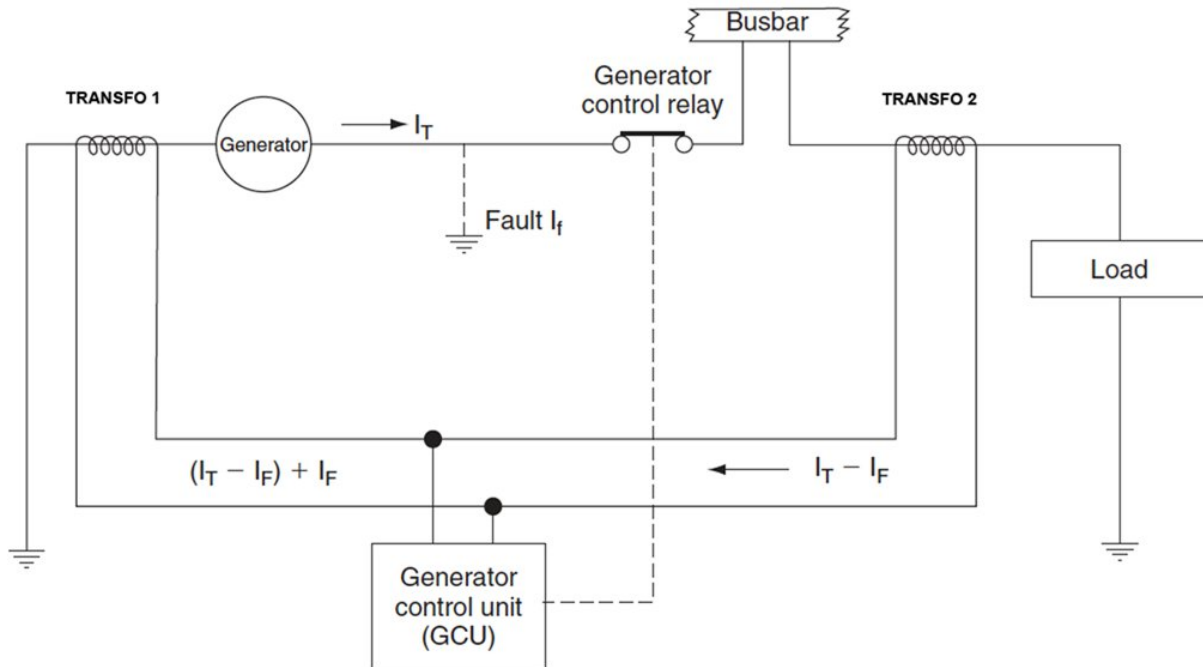
326: (Q129) In a Doppler VOR (DVOR) the reference signal is ...(1)..., the bearing signal is ...(2)... and the direction of rotation of the bearing signal is ...(3)...

- o (A): (1) AM - (2) FM - (3) clockwise.
- o (B): (1) FM - (2) AM - (3) clockwise.
- o (C): (1) AM - (2) FM - (3) anti-clockwise.

327: (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): 4 and 5.
- o (B): 1, 2 and 3.
- o (C): 3, 4 and 5.

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



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

329: (Q698) Angle of attack may be sensed by means of ... (1) ... mounted ... (2) ...

- o (A): (1) a conical slotted probe - (2) on the wing leading edge.
- o (B): (1) a stick pusher - (2) adjacent to the flying controls.
- o (C): (1) a hinged vane sensor - (2) on the wing leading edge.

330: (Q576) A partially blocked air filter will cause the air-driven turn indicator to:

- o (A): indicate zero rate of turn.
- o (B): under read the correct rate of turn.
- o (C): over read the correct rate of turn.

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

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

332: (Q502) In an ARINC 429 wordstring, bits 1 to 8 represent the

- o (A): source of message.
- o (B): destination LRU address.
- o (C): information contained in the data word.

333: (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): Increase.

o (C): Decrease.

334: (Q739) This is a.... (See the figure)



- o (A): RJ12 connector.
- o (B): RJ45 connector.
- o (C): RJ61 connector.

335: (Q36) With an increase in its angle of attack, what happens to the drag acting on a rotor blade?

- o (A): increases.
- o (B): decreases.
- o (C): remains constant.

336: (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): R-NAV system.
- o (B): INS or IRS.
- o (C): GNSS.

337: (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).

338: (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

339: (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): only the replies from the transponders of other aircraft.
- o (C): both the replies from the transponders of other aircraft and the ground-based radar echoes.

340: (Q732) The first 2 bytes of the IP address for IMA communication are called ...

- o (A): Sign Status Matrix (SSM).
- o (B): Host ID.
- o (C): the Net ID.

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

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

342: (Q744) The passengers can listen to the selected audio and video channels by connecting a headset to ...

- o (A): the IFES SEB (Seat Electronic Box).
- o (B): the IFES RJU (Remote Jack Unit).
- o (C): the IFES SDU (In-Flight Entertainment System Smart Display Unit).

343: (Q58) Pressure Error (PE) will cause an altimeter to:

- o (A): only over-read in a climb.
- o (B): consistently under-read in a climb or descent.
- o (C): either over-read or under-read in level flight.

344: (Q700) An engine vibration indicator receives a signal from different sensors (accelerometers). It indicates the:

- o (A): Vibration amplitude at a given frequency.
- o (B): Acceleration measured by the sensors, expressed in g.
- o (C): Vibration frequency expressed in Hz.

345: (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): Controller Pilot Data Link communications (CPDLC).
- o (B): Automatic Dependent Surveillance Broadcast (ADS-B).
- o (C): AFDX (Avionics Full Duplex Switched Ethernet).

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

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

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

- o (A): D and F
- o (B): D and E
- o (C): F1 and F2

348: (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.

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

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

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

- o (A): NACA duct.
- o (B): float valve.
- o (C): drain check valve.

351: (Q367) What is used to prevent moisture from freezing as the pressure drops in a pneumatic system?

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

352: (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.

353: (Q427) The application of normal forces on the control column with the autopilot engaged is called....

- o (A): touch control steering.
- o (B): parallel connected system.
- o (C): control wheel steering.

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

- o (A): by a gravity feed pump.
- o (B): by suction from the engine driven fuel pump.
- o (C): by a fuel boost pump.

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

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

356: (Q333) When operating a windscreen wiper on the ground, make sure to....

- o (A): use water as lubricant when operating.
- o (B): use slow wiper only.
- o (C): place soft cloth between blade and window.

357: (Q424) When the bank angle limit is applied to the autopilot , it means

- o (A): the max roll angle that can be demanded by the autopilot.
- o (B): maximum rudder deflection.
- o (C): the max aileron angle that can be commanded.

358: (Q683) Airspeed is shown:

- o (A): on both EADIs.
- o (B): on both EHSIs.
- o (C): only on the pilot in commands EHSI.

359: (Q505) The continuous broadcast of recorded non-control information in busier terminal areas (i.e. Airport) is called

- o (A): ACARS
- o (B): ATIS
- o (C): SITA

360: (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): on solid materials combustible materials only.
- o (C): for every kind of fire. In the cabin it will be used for fires coming from electrical equipment.

361: (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.

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

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

363: (Q766) A pre-departure clearance or PDC is given to the pilots via....

- o (A): an ACARS message.
- o (B): voice (from ATC).
- o (C): the datalink system.

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

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

365: (Q305) Accumulators as fitted to aircraft hydraulic systems ...

- o (A): provide additional fluid if leaks occur.
- o (B): store fluid under pressure.
- o (C): are only ever used in an emergency.

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

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

367: (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 and 3.
- o (B): 2, 3 and 4.
- o (C): 1, 2, 3, 4 and 5.

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

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

369: (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): symbol generator.
- o (C): video card.

370: (Q508) Which one of the following correctly lists the major ground based components of a Microwave Landing System (MLS)?

- o (A): Combined azimuth and elevation transmitter, marker beacons.
- o (B): Separate azimuth and elevation transmitters, outer and middle marker beacons.
- o (C): Separate azimuth and elevation transmitters, DME facility.

371: (Q719) The printer used in the cockpit is....

- o (A): a dot matrix printer.
- o (B): an inkjet printer.
- o (C): a laser printer.

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

- o (A): RMI (Radio Magnetic Indicator).
- o (B): HSI (Horizontal Situation Indicator).

o (C): ADI (Attitude Director Indicator).

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

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

374: (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 the heading of his aircraft.
- o (C): asking the pilot to modify effectively the vertical speed of his aircraft.

375: (Q351) What is the advantage that stress sensors have over other air/ground sensing systems?

- o (A): Easier to replace.
- o (B): Can measure aircraft weight.
- o (C): More reliable.

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

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

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

- o (A): a setting which limits the movement of the two lane actuators.
- o (B): 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 (C): a passive failure with the system reverting to manual operation.

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

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

379: (Q304) What is the function of a thermal relief valve in an hydraulic system?

- o (A): prevent excess temperature.
- o (B): relieve excess pressure.
- o (C): prevent a leak back of pressure.

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

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

381: (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?

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

382: (Q735) Which network system routes data between the airplane and ground networks and stores airline data and applications?

- (A): IDN.
- (B): IMA (core network).
- (C): ATIS.

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

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

384: 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.

- (A): 1, 2 and 4.
- (B): 1, 2 and 3.
- (C): 1 and 4.

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

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

386: (Q703) The Primary Flight Display (PFD) displays information dedicated to:

- (A): piloting.
- (B): systems.
- (C): engines and alarms.

387: (Q72) For a frequency of 121.95 MHz, what is the wavelength?

- (A): 2.46 km
- (B): 2.46 m
- (C): 2.46 cm

388: (Q552) In a direct cable control system, what happens to the forces the pilot feels if airspeed increases?

- (A): Increase.
- (B): Decrease.
- (C): Remain the same.

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

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

390: (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 waves are above the sensitivity range of the human eye.
- o (C): Because radio-frequency energy is low powered.

391: (Q598) Machmeter readings are subject to:

- o (A): compressibility and position errors.
- o (B): instrument and pressure errors.
- o (C): instrument and compressibility errors.

392: (Q597) If the static source becomes blocked with ice and the aircraft descends rapidly, the Machmeter will:

- o (A): not be subject to any errors because of the dual capsule. not be subject to any errors because of the dual capsule.
- o (B): under-read. under-read.
- o (C): over-read. over-read.

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

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

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

- o (A): return distance.
- o (B): skip distance.
- o (C): reception distance.

395: (Q586) The IVSI is:

- o (A): Unreliable in pitch but reliable in roll.
- o (B): only unreliable at angles of bank exceeding 55°.
- o (C): Unreliable in unbalanced turns/angles of bank exceeding 40°.

396: (Q697) Stall warning will be given at speeds....

- o (A): at the actual stall speed.
- o (B): higher than stall speed.
- o (C): lower than stall speed.

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

- o (A): F
- o (B): D

o (C): C

398: (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 pushing a button located on the throttles.

o (C): By the pilot selecting G.A. mode on the thrust computer control panel.

399: (Q731) For IMA, a faster and duplex data communication protocol was required than the ARINC 429 standard. The new standard is ..

o (A): AFDX (Avionics Full Duplex).

o (B): ARINC 664.

o (C): ARINC 429 duplex.

400: (Q30) An aircraft....

o (A): has more than one critical mach number on different parts of the aircraft.

o (B): has only one critical mach number.

o (C): has more than one critical mach number on the wing only.

401: (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.

402: (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, 2 and 3.

o (B): 1, 3 and 5.

o (C): 3, 4 and 5.

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

o (A): this may cause the FMS to deviate from the desired track.

o (B): this will have no effect on the FMS.

o (C): this FMS will automatically update the system.

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

o (A): 1013.2 mbar level.

o (B): 29.92 bar level.

o (C): 10.92 mbar level.

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

o (A): Flight attendant.

o (B): Pilot.

o (C): Passenger.

406: (Q711) A FMS navigation database is updated

o (A): every 28 days.

- o (B): at the operators request.
- o (C): once a month.

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

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

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

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

409: (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.

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

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

411: (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).

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

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

413: (Q587) The function of the accelerometer in the IVSI is....

- o (A): to damp' the system during rapid alternating height changes.
- o (B): to give immediate response to vertical departures from horizontal flight.
- o (C): to enable the instrument to be used at bank angles in excess of 40°.

414: (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): 1, 3 and 4.
- o (B): 2
- o (C): 1 and 5

- 415: (Q748) Each Ethernet station is given a 48-bit address. How are the first two fields called?
- o (A): Parity Bit.
 - o (B): Source/destination Identifier (SDI).
 - o (C): Country Code.
- 416: (Q86) The density of ionized layers is normally greatest during which of the following periods?
- o (A): Between afternoon and sunset.
 - o (B): Between early morning and late afternoon.
 - o (C): At night.
- 417: (Q336) What is the function of a fusible plug in an aircraft wheel rim?
- o (A): As overpressure protection.
 - o (B): To deflate the tyre before removal.
 - o (C): As overtemperature protection.
- 418: (Q54) What are the main longitudinal members in a fuselage called?
- o (A): longerons.
 - o (B): frames.
 - o (C): spars.
- 419: (Q702) A vibration meter measures the....
- o (A): period in seconds.
 - o (B): frequency in Hz.
 - o (C): amplitude at a given frequency.
- 420: (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): alert message.
 - o (C): a warning.
- 421: (Q272) Where is the lavatory waste bin fire extinguisher localized?
- o (A): In lavatory ceiling.
 - o (B): There is no extinguisher in the lavatory.
 - o (C): Is usually located above the waste bin.
- 422: (Q635) Increasing the angular momentum of a gyro rotor will:
- o (A): decrease the gyroscopic rigidity.
 - o (B): increase the gyroscopic rigidity.
 - o (C): have no substantial effect on gyroscopic rigidity.
- 423: (Q562) The velocity of sound at the sea level in a standard atmosphere is:
- o (A): 644 kts.
 - o (B): 332 kts.
 - o (C): 661 kts.
- 424: (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): Height indication is removed.
- o (C): DH lamp flashes red.

425: (Q571) True airspeed is....

- o (A): the pressure caused by the forward movement of the aircraft.
- o (B): equal to dynamic pressure minus static pressure.
- o (C): dependent on the air density.

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

- o (A): preventing fluid loss from a leaking jack.
- o (B): maintaining fluid press when the emergency system fails.
- o (C): change over from main to alternate system in the case of failure.

427: (Q65) What types of nuts must be used for bonding connections?

- o (A): Self locking nuts of all metal construction.
- o (B): Nuts must not be used for bonding.
- o (C): Nylon self locking nuts.

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

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

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

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

430: (Q391) What controls in a closed loop system the flight control movement?

- o (A): A rate gyro.
- o (B): An amplifier.
- o (C): A servomechanism.

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

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

432: (Q524) Which system do you have to use if you want listen music in an aircraft?

- o (A): 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 (B): 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 (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.

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

- o (A): Gives good control and handling characteristics.
 - o (B): All of the answers.
 - o (C): Stop unwanted rate of motion from developing.
- 434: (Q439) With autothrottle selected in the SPEED MODE compatible autopilot modes are
- o (A): IAS HOLD and ALT ARM.
 - o (B): VOR ARM and HDG HOLD.
 - o (C): V/S and ALT ARM.
- 435: (Q151) How many satellites are required for GNSS?
- o (A): 8
 - o (B): 4
 - o (C): 6 (90° apart)
- 436: (Q218) An air-to-air heat exchanger is provided to....
- o (A): increase the air supply temperature.
 - o (B): reduce the air supply temperature.
 - o (C): provide an emergency ram air supply.
- 437: (Q595) IAS is adjusted to CAS by the application of:
- o (A): instrument and pressure error.
 - o (B): compressibility error.
 - o (C): density error.
- 438: (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.
- 439: (Q265) A carbon monoxide detector has to be replaced.....
- o (A): monthly.
 - o (B): daily.
 - o (C): normally every 90 days.
- 440: (Q279) Pushing the fire test button does not test:
- o (A): Squibs.
 - o (B): Fire detectors.
 - o (C): Indications and warnings.
- 441: (Q312) A constant volume hydraulic system uses a(n).... to relieve pressure in the system when no services are being used?
- o (A): Pressure relief valve.
 - o (B): return line back to pump.
 - o (C): ACOV (Automatic Cut Out Valve).
- 442: (Q175) The output sine waves of a 3-phase alternator will be separated by:
- o (A): 120 degrees

- o (B): 90 degrees
- o (C): 60 degrees

443: (Q720) A permanent monitoring of the vertical acceleration (G-force) of an aircraft during landing is a part of....

- o (A): the 'Damage Tolerance Monitoring'.
- o (B): the 'Low Cycle Fatigue Counter'.
- o (C): the 'HUMS' (Health and Usage Monitoring System).

444: (Q353) What is the result when the steel target is in close proximity to the proximity sensor?

- o (A): An open switch.
- o (B): A closed switch.
- o (C): A failed switch.

445: (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.
- o (C): the left with some aileron assistance.

446: (Q679) The centre of the weather return is : (See the figure)



- o (A): 106° relative, 18 nm.
- o (B): 30 nm left of track, 15 nm ahead.
- o (C): 332° relative, 13 nm.

447: (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.

448: (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): management system optimized in the horizontal plane.
- o (B): 3-axis Flight Management System.
- o (C): 2-axis Flight Management System.

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

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

450: (Q37) What will the advancing blade do during forward flight?

- o (A): flap up.
- o (B): lag.
- o (C): flap down.

451: (Q339) On all aircraft equipped with retractable landing gear, some means must be provided to ..

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

452: (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.

453: (Q653) The directional gyro keeps its rotation axis aligned toward:

- o (A): A point in space.
- o (B): Geographic North.
- o (C): Magnetic North.

454: (Q71) Skin effect is most likely to occur:

- o (A): at high power levels up to VHF.
- o (B): at the higher frequencies i.e. VHF and above.
- o (C): in radar systems fed by rectangular waveguides.

455: (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 use of the GSM Cell Data Mode (CDM), also referred to as Cell Modem (CM).
- o (B): the ATIS (Automatic Terminal Information Service).
- o (C): the ACR (Avionics Communication Router).

456: (Q704) The Head Up Display (HUD) is a device allowing the pilot, while still looking outside, to have:

- o (A): a monitoring only during Cat III precision approaches.
- o (B): a synthetic view of the instrument procedure.
- o (C): a navigating control aid.

457: (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.

458: (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.

459: (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.

460: (Q761) Switching from avionics to flight operation domain is the OIS (On board Information System) is done by....

- o (A): OIT side switches.
- o (B): OIT Terminal processor unit.
- o (C): OIT control device.

461: (Q645) A leaking case on an air-driven turn and bank indicator will cause:

- o (A): no appreciable error.
- o (B): the turn to over-read.
- o (C): the turn to under-read.

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

- o (A): heat exchanger.
- o (B): bypass valve.
- o (C): water extractor.

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

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

464: (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.

465: (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 wheel speed is too high.
- o (B): the brake temperature is too high.
- o (C): the landing gear is not locked down.

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

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

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

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

468: (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 correct angle of bank.
- o (C): Nose up and bank angle too high.

469: (Q556) How can flutter be reduced?

- o (A): Mass balancing.
- o (B): A horn balance.
- o (C): Servo tabs.

470: (Q728) The standardized Real-Time Operating system used in IMA uses the.....

- o (A): RTOS specification.
- o (B): ARINC 429 specification.
- o (C): ARINC 653 specification.

471: (Q563) The rate-of-turn is the:

- o (A): change-of-heading rate of the aircraft.
- o (B): yaw rate in a turn.
- o (C): aircraft speed in a turn.

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

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

473: (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.

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

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

475: (Q55) How are skin panels strengthened?

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

476: (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, 3, 4 and 5.
- o (B): 1, 2, 3 and 6.
- o (C): 1, 2, 3, 4 and 5.

477: (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, not enough bank.
- o (B): Nose up, too much bank.
- o (C): Bank and pitch correct.

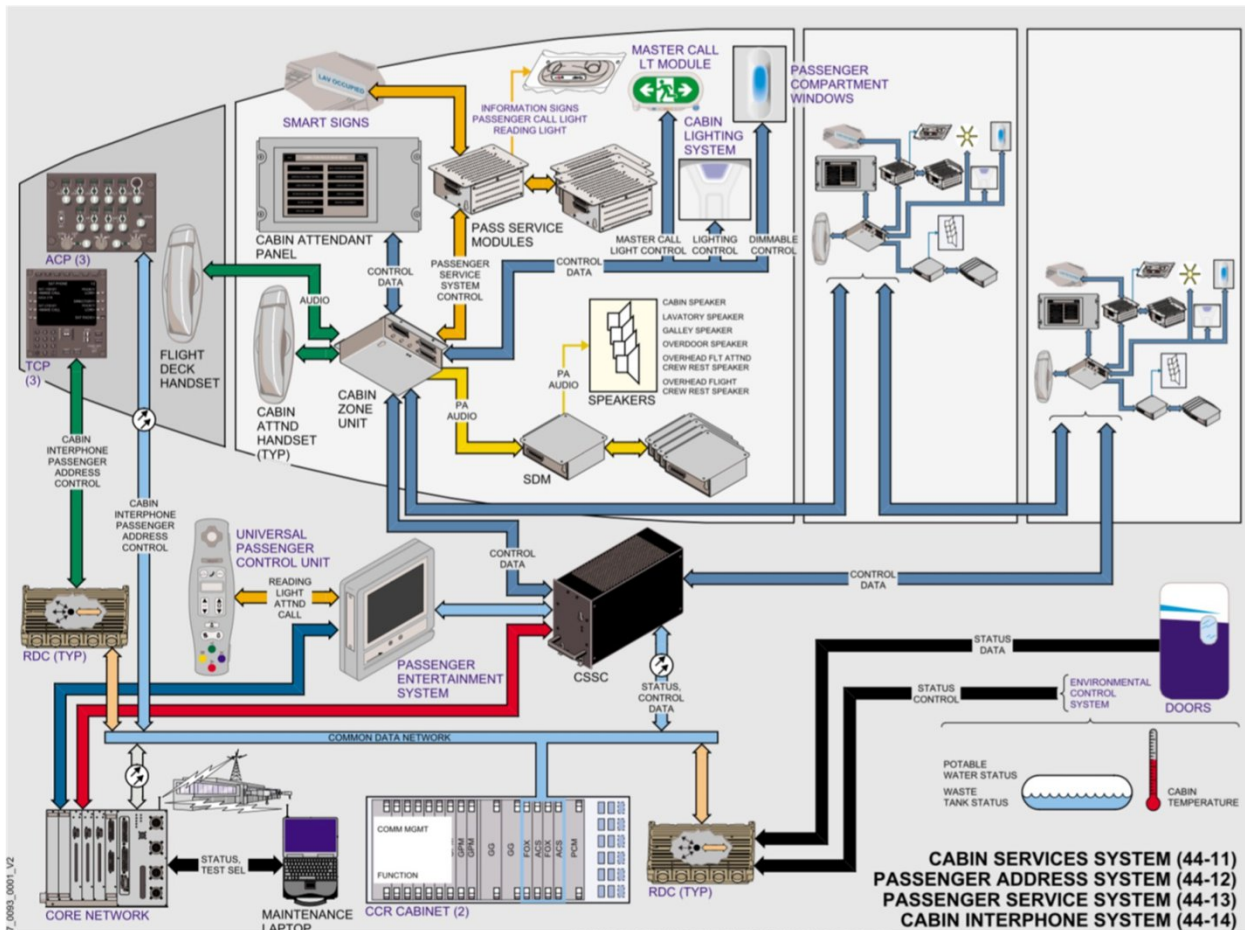
478: (Q58) What is ATA Zone 100?

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

479: (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.

480: (Q757) The seating and zones are controlled from the cabin configuration software inside the....
(See figure)



o (A): Cabin Attendant Panel.

o (B): Cabin Services System Controller.

o (C): Passenger Control Unit.

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

o (A): It controls the speed of the ram air turbine.

o (B): It controls the speed of the constant speed motor generator (CSM/G).

o (C): It controls the output voltage of the hydraulic motor generator (HMG).

482: (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.

483: (Q726) What type of valve is the toilet tank drain valve?

o (A): Spring loaded closed.

o (B): Spring loaded open.

o (C): Not spring loaded.

484: (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).

485: (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): pressure altitude.
- o (C): density altitude.

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

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

487: (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): 24 hours.
- o (C): 28 days.

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

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

489: (Q509) Which one of the following is an advantage of a Microwave Landing System (MLS) compared with an Instrument Landing System (ILS)?

- o (A): It is insensitive to geographical site and can be installed at sites where it is not possible to use an ILS.
- o (B): There is no restriction on the number of ground installations that can be operated because there is an unlimited number of frequency channels available.
- o (C): The installation does not require to have a separate method (marker beacons or DME) to determine range.

490: (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.

491: (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 high speed, two way, multiple terminal digital data bus operating at 2 megahertz.
- o (C): a pair of twisted wires with shielding around them for full duplex operation at 2 megahertz.

492: (Q564) Pressure measured from atmospheric pressure is called....

- o (A): absolute pressure.
- o (B): gauge pressure.
- o (C): relative pressure.

493: (Q672) The flight data recorder must automatically stop data recording when the....

- o (A): the airplane is on the ground and the engines are turned off.
- o (B): main gear shock strut compresses when touching the runway.
- o (C): airplane clears the runway.

494: (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): reducing the erection rate of the gyro assembly.
- o (C): inclination of the gyro spin axis.

495: (Q130) Concerning conventional and Doppler VORs (DVOR), which of the following is correct?

- o (A): The DVOR will always have a 'D' in the ident.
- o (B): It is not possible for the instrumentation display to determine which type is being used.
- o (C): The DVOR has a higher audio ident tone than the standard VOR.

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

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

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

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

498: (Q506) MLS installations notified for operation, unless otherwise stated, provide azimuth coverage of....

- o (A): +or - 20° about the nominal courseline out to a range of 20 NM.
- o (B): +or - 20° about the nominal courseline out to a range of 30 NM.
- o (C): +or - 40° about the nominal courseline out to a range of 20 NM.

499: (Q617) A remote reading thermometer depends upon....to indicate changes in temperature.

- o (A): change of electrical resistance with temperature.
- o (B): change of electrical capacitance with change in temperature.
- o (C): change of electrical resistance of the two metals.

500: (Q657) Deviation compensation in a flux gate compass is done:

- o (A): Electronically.
- o (B): Automatically within the compass system.
- o (C): Mechanically.

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

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

502: (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): all 4.
- o (C): 2 and 4.

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

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

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

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

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

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

506: (Q15) What do ruddervators do?

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

507: (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.

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

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

509: (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.

510: (Q615) When OAT increases what happens to a helicopter operating ceiling?

- o (A): Increase.
- o (B): Decrease.
- o (C): No effect.

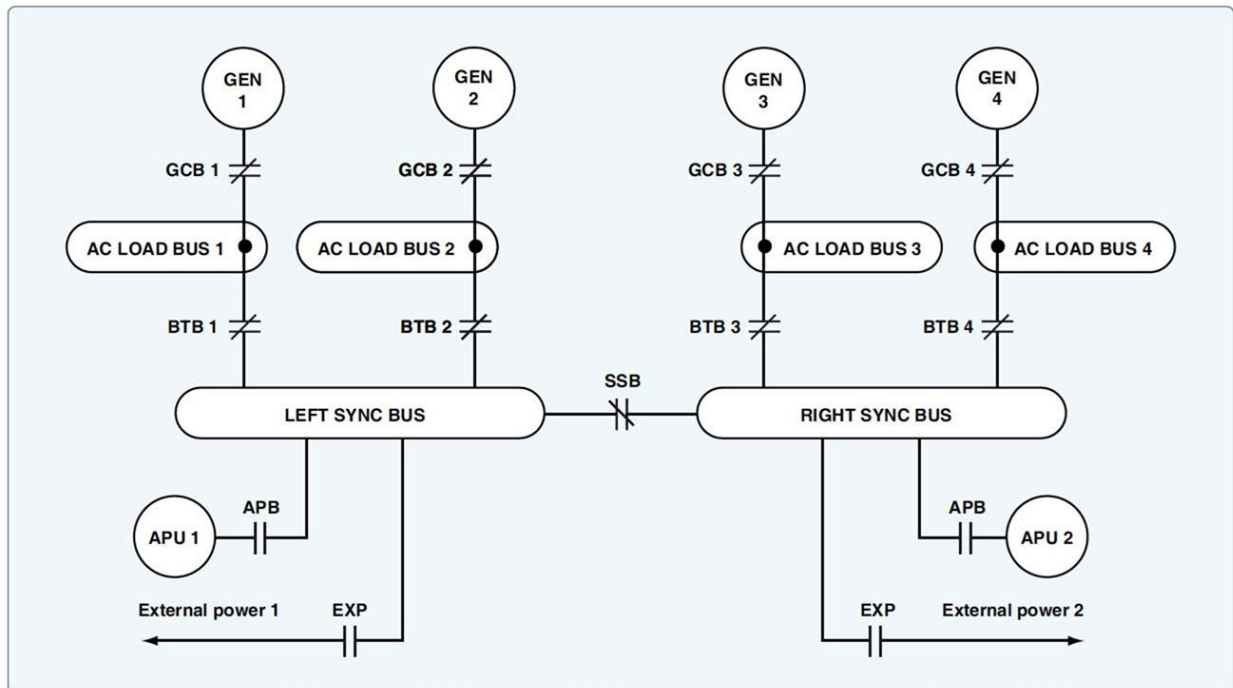
511: (Q371) What happens if the pneumatic system bleed air is OFF, purposely or by failure?

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

512: (Q356) What is the chemical used in chemical oxygen generators?

- o (A): Sodium chlorate and iron
- o (B): Ozone
- o (C): Sodium hydroxide

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



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

514: (Q306) One reason for fitting an accumulator in a hydraulic system is to....

- o (A): relieve excess pressure.
- o (B): minimize the possibility of pump cavitation.
- o (C): absorb pressure surges.

515: (Q555) What eliminates Dutch roll?

- o (A): The differential ailerons.
- o (B): The Dutch Roll damper.
- o (C): The yaw damper.

516: (Q751) Data from the In-Flight Entertainment system can be transferred to a terminal station on the ground

- o (A): through an ethernet link when the aircraft is on the ground.
- o (B): through an ethernet link when the aircraft is at the terminal.
- o (C): through a wireless GSM Cell Data Modem when the aircraft is at the terminal.

517: (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.

518: (Q441) During flare mode autothrottle will

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

519: (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.
- o (B): left upper spoiler up and left lower spoiler down.
- o (C): left spoiler is deflected up and the right down.

520: (Q311) What is the purpose of a 'cut-out' valve in a hydraulic system?

- o (A): is to relieve the pump of load when the operation of services is complete and the accumulator charged with fluid.
- o (B): is to limit loss of fluid in the event of pipe fracture.
- o (C): is to prevent creep in jack operated services which have several selected positions.

521: (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.

522: (Q28) Above the critical Mach number, the drag coefficient

- o (A): increases.
- o (B): decreases.
- o (C): remains the same.

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

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

524: (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.

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

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

526: (Q578) Density errors are the result of variations in atmospheric....

- o (A): temperature only.
- o (B): pressure and temperature.
- o (C): pressure only.

527: (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): Maintenance Message.
- o (C): Status Message.

528: (Q143) What is an FMC?

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

529: (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): NNSS-Transit and GLONASS.
- o (C): NAVSTAR/GPS and GLONASS.

530: (Q671) The flight data recorders must preserve the required data of the last:

- o (A): 30 minutes of operation.
- o (B): 25 hours of operation.
- o (C): 48 hours of operation.

531: (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): 108.10 MHz - 112 MHz
- o (C): 30 MHz - 300 MHz

532: (Q647) On an instrument check whilst taxiing, when carrying out a turn, the ball on the turn and bank indicator should indicate:

- o (A): no slip or skid.
- o (B): a slip into the turn.
- o (C): a skid out of the turn.

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

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

534: (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.

535: (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.

536: (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.

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

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

538: (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): Ethernet.
- o (B): VLF.
- o (C): Either infrared (IR) or radio frequency (RF).

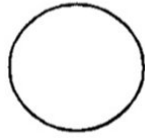
539: (Q467) Secondary Surveillance Radar is a form of .(1)..radar with .(2)..type emissions operating in the .(3)..band.

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

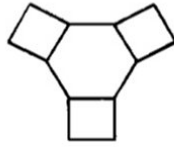
540: (Q681) The symbols A, C and E are best described respectively as: (See the figure)



A



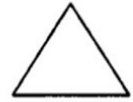
B



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.

541: (Q358) In which type of aircraft is liquid oxygen used?

- o (A): Most large passenger aircraft.
- o (B): Military aircraft.
- o (C): Aircraft flying at very high altitudes.

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

- o (A): Sporadic E
- o (B): Sudden ionospheric disturbance.
- o (C): Ionospheric storms.

543: (Q126) In which frequency band do VOR transmitters operate?

- o (A): VHF.
- o (B): SHF.
- o (C): UHF.

544: (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.

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

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

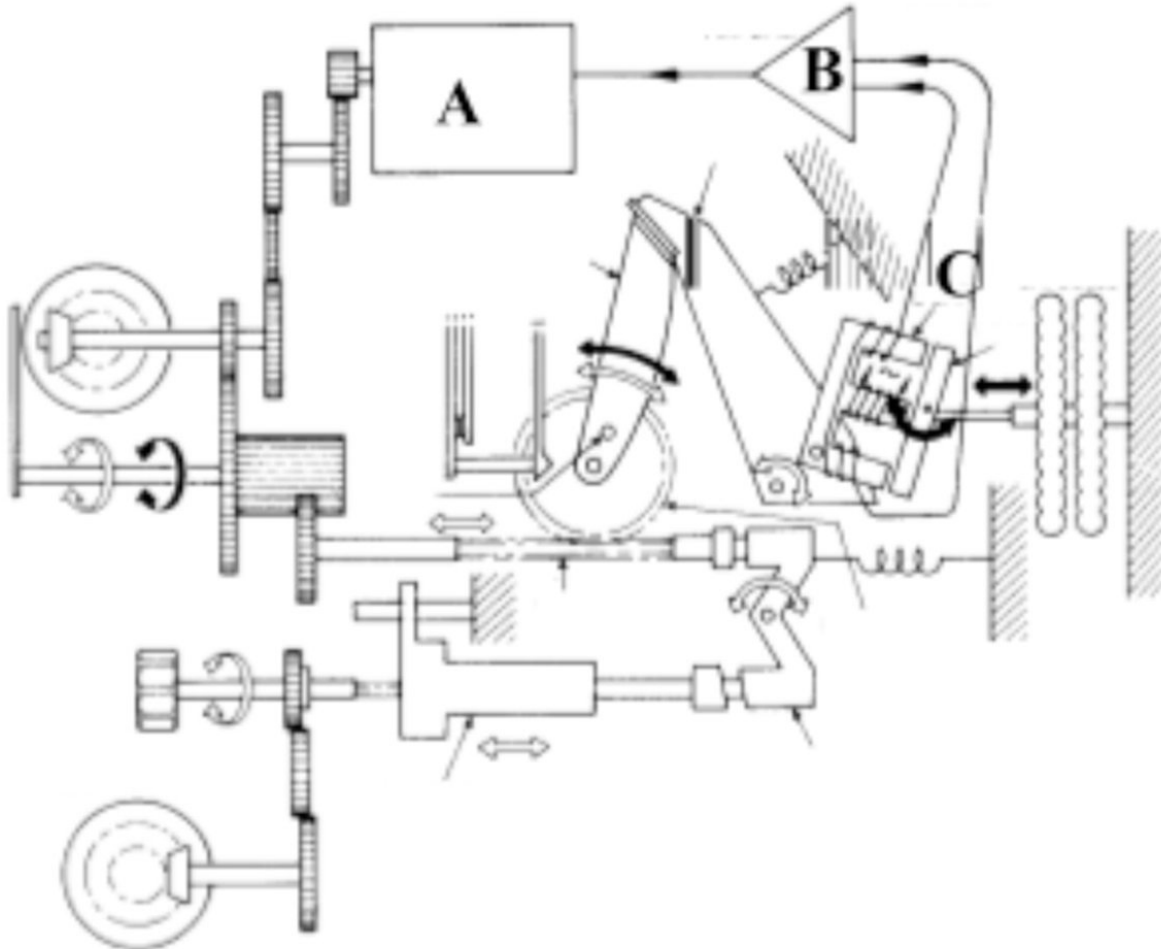
546: (Q68) What causes the glow which can be seen during the initial stage of a lightning strike?

- o (A): Burning of metal.
- o (B): Ionization of the air.
- o (C): Static discharging.

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

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

548: (Q582) In the next figure of a servo altimeter the components labeled A, B and C in order are:



- o (A): torque motor - inductive pick-off - amplifier
- o (B): two way motor - amplifier - inductive pick-off
- o (C): torque motor - amplifier - transducer

549: (Q390) The fundamental components of an autopilot control loop are:

- o (A): rate gyro, servo motor, torque limiter.
- o (B): rate gyro, servomotor, error signal generator.
- o (C): torque limiter, error signal generator, servomotor.

550: (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 5

- o (B): 1 and 4
- o (C): 2 and 4

551: (Q692) The alerting system functional components used to accomplish the alerting and informing functions for warnings should include:

- o (A): master visual alert, and visual information and master aural alert.
- o (B): master visual alert or visual information and master aural alert.
- o (C): visual information, master aural alert and voice information.

552: (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.

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

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

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

- o (A): the up-going aileron produces increased drag.
- o (B): the down-going aileron allows air to spill from below the wing to the upper surface of the ailerons.
- o (C): the down-going aileron moves through a greater angle than the up- going aileron.

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

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

556: (Q727) Communication in the integrated modular avionics network is partly standardized in...

- o (A): ARINC 653 for the software avionics and AFDX for the data network bus.
- o (B): ARINC 429, ARINC 653 or AFDX.
- o (C): ARINC 429 or AFDX (Avionics Full Duplex).

557: (Q737) Airplane system data critical to flight are connected to the..... In the Core Network System.

- o (A): Isolated Data Network (IDN).
- o (B): Common Data Network (CDN).
- o (C): Open Data Network (ODN).

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

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

559: (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.

560: (Q650) The principle of operation of the turn and bank indicator is best described as:

- o (A): 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 (B): 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.
- o (C): an earth gyro in which a calibrated spring ensures the tilt of the gyro is proportional to the aircraft rate of turn.

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

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

- o (A): a caution light and an aural warning.
- o (B): an aural warning only.
- o (C): an aural warning and flashing light.

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

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

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

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

565: (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.

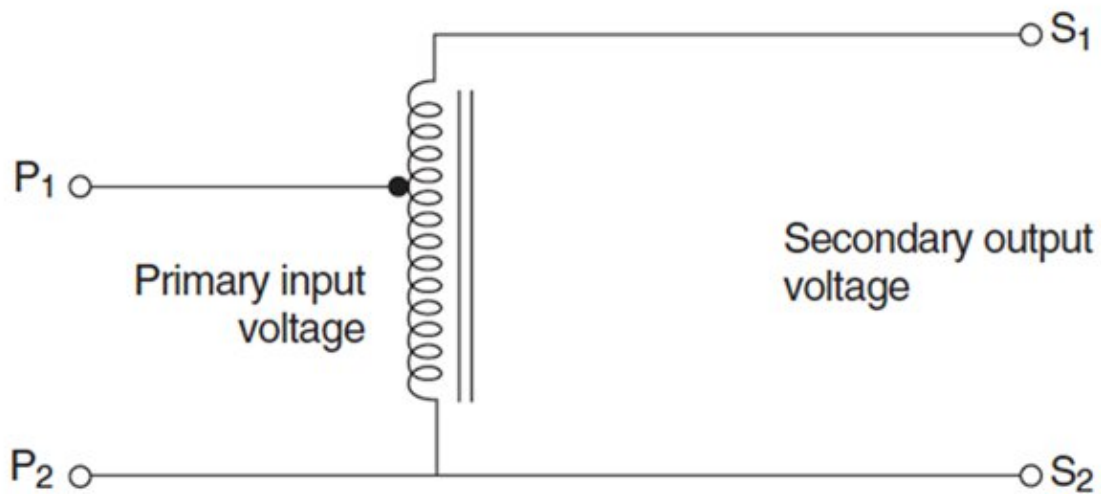
566: (Q322) When is a 'hot rod' type of ice detector switched on?

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

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

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

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



- (A): Autotransformer
- (B): Transformer rectifier.
- (C): Current transformer

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

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

570: (Q740) This is a.... (See the figure)



- o (A): QuadraX connector.
- o (B): LC connector (fibre optic).
- o (C): Coaxial connector.

571: (Q458) If a fault is detected during an autoland approach the system will totally disconnect if it is a

- o (A): Triplex system.
- o (B): Simplex system.
- o (C): Duplex system.

572: (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).

573: (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): glaze ice.
- o (C): hoar frost.

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

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

- o (A): is used as a supplemental use source of bleed air.

- o (B): can be switched on and off by the crew.
- o (C): is used on turbo-prop and piston engine.

576: (Q655) A slaved directional gyro derives its directional signal from:

- o (A): The air data computer.
- o (B): A direct reading magnetic compass.
- o (C): The flux valve.

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

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

578: (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 at a constant flow.
- o (C): A mixture of oxygen and cabin air while the user is inhaling.

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

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

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

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

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

- o (A): when the engine driven pump fails.
- o (B): when the booster pump fails.
- o (C): when both the engine driven and booster pump fail.

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

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

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

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

584: (Q26) Aerodynamic speeds vary all the way from low subsonic to hypersonic. The limits of high subsonic speed range are

- o (A): 0.3 to 0.8 M
- o (B): 1.2 to 5 M

- o (C): 0.8 to 1.2 M

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

- o (A): close the cross bleed valve.
- o (B): pull the fire shut-off handle.
- o (C): close the HP fuel lock.

586: (Q443) When GA is initiated?

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

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

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

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

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

589: (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.

590: (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.

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

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

592: (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): calibrated airspeed (CAS) 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): indicated airspeed (IAS) is maintained constant by the autopilot by means of elevator.

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

- o (A): The manufacturer name and P/N & S/N. Approval date and instructions to use. Extinguisher type, weight details and last check or expire date. In the bottle usually the manufacturers date is engraved.
- o (B): The manufacturer name. P/N & S/N. The colour will say the type (green=water, red=halon). The press indicator will show if the bottle is filled to level.
- o (C): The manufacturer and approval date and instructions to use.

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

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

595: (Q331) What must be done when testing windshield wipers?

- o (A): operate them on a dry windshield.
- o (B): lift the wipers away from the windshield.
- o (C): use a continuous flow of water on the windshield.

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

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

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

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

598: (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): As close to the power source as possible.
- o (C): Where access to replace the fuse is easiest.

599: (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, 3, 4.
- o (C): 1, 2, 3.

600: (Q394) In the FMS vertical navigation (V NAV) climb mode the throttles are used for

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

601: (Q94) A transmission line is designed to perform which of the following functions?

- o (A): Guide electrical energy from point to point.
- o (B): Disperse energy in all directions.
- o (C): Replace the antenna in a communications system.

602: (Q575) If the static vent becomes blocked on an unpressurized aircraft, what could the pilot do?

- o (A): Select standby pitot source.
- o (B): Break the VSI glass.
- o (C): Open the window.

603: (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.

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

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

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

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

606: (Q736) Airplane system data not critical to flight are connected to the..... In the Core Network System.

- o (A): Common Data Network (CDN).
- o (B): Crew Wireless LAN Unit (CWLU).
- o (C): Open Data Network (ODN).

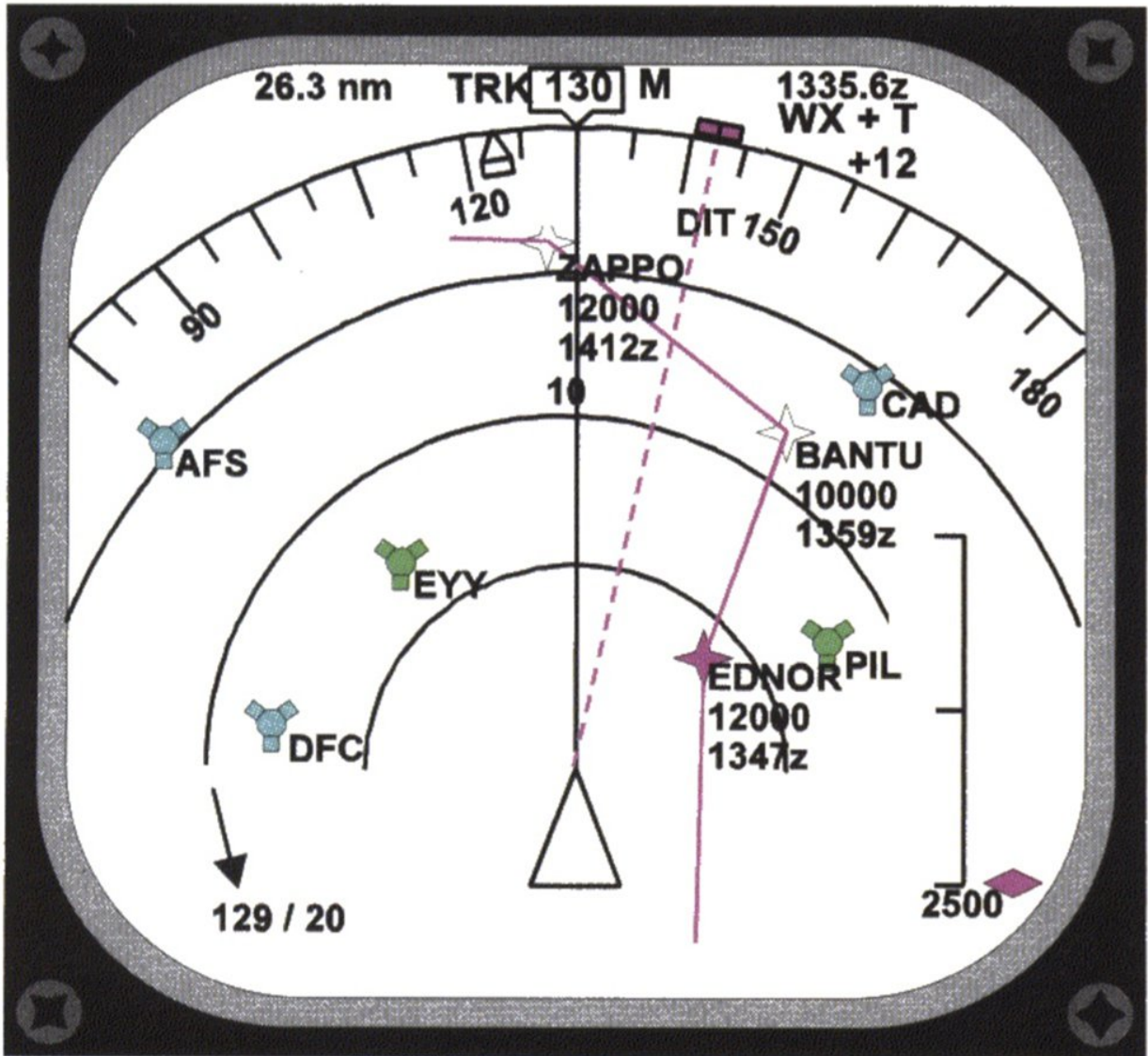
607: (Q723) Maintenance Information at an out-station can be read from the....

- o (A): FMS (Flight Management system).
- o (B): Electronic library system.
- o (C): CDU (Control Display Unit).

608: (Q771) Documentation for the IFE (In-Flight Entertainment) System is part of the...

- o (A): Avionics Domain
- o (B): Communication & Cabin Domain
- o (C): Flight Operations Domain.

609: (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's track is 165°M.
- o (C): The aircraft is closing the localiser from the right, heading 130°M and is approaching the glide path from above.

610: (Q566) In a mechanical oil pressure gauge the sensing element is:

- o (A): a liquid capillary.
- o (B): a bourdon tube.
- o (C): a helical bimetallic spring.

611: (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.

612: (Q500) ARINC 629 current mode couplers are

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

613: (Q56) Safe-life is

- o (A): the minimum number of flying hours that should elapse before a major structural failure occurs.
- o (B): the sharing of loads between adjacent members.
- o (C): the maximum number of flying hours that should elapse before a major structural failure occurs.

614: (Q393) Which modes are incompatible?

- o (A): VOR + ALTITUDE HOLD
- o (B): HDG + V/S HOLD
- o (C): G/S + ALTITUDE HOLD

615: (Q521) Emergency lightning can be illuminated by....

- o (A): a guarded three position switch (ON-OFF-ARMED) in the cockpit and a Two position switch in the cabin (ON-NORMAL).
- o (B): automatically when power is removed from the aircraft (in an emergency or by the pilots).
- o (C): a guarded three position switch (ON-OFF-ARMED) in the cabin and a Two position switch in the cockpit (ON-NORMAL).

616: (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 no change in drag.
- o (C): there is a reduction in drag.

617: (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.

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

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

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

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

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

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

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

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

622: (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) the distance - (2) increase - (3) at the same speed.
- o (B): (1) relative motion - (2) decrease - (3) apart.
- o (C): (1) apparent moving - (2) decrease - (3) together.

623: (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.

624: (Q33) What is autorotation?

- o (A): loss off directional control.
- o (B): spinning of the helicopter fuselage due to the loss of anti-torque.
- o (C): descent of the helicopter with power off.

625: (Q344) Which of the following are characteristics of a carbon brake?

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

626: (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): ND (Navigation Display).
- o (C): throttles position.

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

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

628: (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.

629: (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.

630: (Q716) Direct texts entry for airport directory or word searches on the Electronic Library System is done by ...

- o (A): the scratch pad on the CDU.
- o (B): a soft keyboard function, displayed on the liquid display screen.
- o (C): a keyboard underneath the active-matrix liquid display.

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

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

632: (Q310) How do you prevent hydraulic fluid foaming?

- o (A): by pressurising.
- o (B): pass over a tray.
- o (C): vent reservoir to atmosphere.

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

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

634: (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.

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

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

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

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

637: (Q656) The purpose of the slaving torque motor is:

- o (A): To send heading information to the compass card in the heading indicator.
- o (B): To ensure that the gyro wheel maintains sufficient speed to stay rigid in space.
- o (C): To produce a precessive force in order to align the gyro with the earth's magnetic field.

638: (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 armature.
- o (C): The brushes.

639: (Q546) A Fowler flap....

- o (A): does not change the wing area.
- o (B): increases wing area.
- o (C): decreases wing area.

640: (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.

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

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

642: (Q334) On large aircraft, what are bogie type undercarriages used for?

- o (A): Absorb increased landing shock.
- o (B): Spread the weight over a large area.
- o (C): Prevent skidding.

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

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

644: (Q668) In a direct reading compass, horizontality is achieved by....

- o (A): using pendulous suspension.
- o (B): changing the magnet system in a liquid-filled bowl.
- o (C): using jeweled bearings.

645: (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 continue in a trimmed safe attitude.
- o (C): the failed system and carry on with an autoland.

646: (Q520) Exit signs must have ...

- o (A): red letters on a white electrically or self illuminated background.
- o (B): black letters on a white electrically or self illuminated background.
- o (C): white electrically or self illuminated letters on a black background.

647: (Q725) How are drinking water pipes are prevented from freezing?

- o (A): Placing the pipes adjacent to hot water piping.
- o (B): Installation of neoprene foam insulation.
- o (C): Wrapping the pipes with heated tapes or blankets.

648: (Q682) WXR display is on:

- o (A): on both the captains and co-pilots screens.
- o (B): the captains screen only.
- o (C): the co-pilots screen only.

649: (Q686) An EFIS, having a control panel, symbol generators and a remote light sensor, also has:

- o (A): EADIs and EHSIs.
- o (B): EADIs and EICAS.
- o (C): EADIs and WXR displays.

650: (Q101) Attenuation is....

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

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

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

652: (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.

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

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

654: (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.

655: (Q545) The type of flap that extends rearward from the trailing edge as it is lowered is....

- o (A): a Zap flap.
- o (B): a Fowler flap.
- o (C): a Kreuger flap.

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

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

657: (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, 2, 3 and 4.
- o (B): 1, 4 and 5.
- o (C): 1, 2 and 6.

658: (Q428) Central Air Data Computers (CADC's) transmit data concerning

- o (A): airspeed and altitude only.
- o (B): airspeed, altitude and Mach number.
- o (C): airspeed, altitude and decision height.

659: (Q355) Oxygen for the flight crew of commercial aircraft comes in which form?

- o (A): Liquid oxygen.
- o (B): Chemical oxygen generators.
- o (C): Gaseous oxygen.

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

- o (A): refraction.
- o (B): diffraction.
- o (C): reflection.

661: (Q499) An ARINC 429 bus uses

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

662: (Q604) An encoding altimeter is a....

- o (A): combined altimeter and airspeed indicator.
- o (B): pneumatic altimeter that sends a digital code to the ATC transponder.
- o (C): full digital altimeter.

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

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

664: (Q523) An aircraft with two passenger decks with more than 100 seats per deck is equipped with....

- o (A): 3 megaphones.
- o (B): 4 megaphones.
- o (C): 1 megaphone.

665: (Q118) The Cockpit Voice Recorder of an aircraft of 5700 kg or less will always store the :

- o (A): last 30 minutes.
- o (B): last 60 minutes.
- o (C): last 120 minutes.

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

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

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

- o (A): is used by the automatic pilot in the altitude hold mode.

- o (B): is used only by the radio altimeter indicator.
- o (C): indicates the distance between the ground and the aircraft.

668: (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.

669: (Q588) The purpose of the IVSI is to:

- o (A): compensate for the change of pressure when initiating a climb or descent.
- o (B): instantaneously indicate to the pilot when an aircraft pitches, especially in steep turns.
- o (C): give an instantaneous indication of the aircraft's vertical speed when a climb or descent has been initiated.

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

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

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

- o (A): Ram air.
- o (B): The low pressure stage of the compressor.
- o (C): The high pressure stage of the compressor.

672: (Q765) Documentation (FCOM, MEL, AFM, CDL) is part of the ...

- o (A): Flight Operations Domain.
- o (B): Avionics Domain.
- o (C): Communication & Cabin Domain.

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

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

674: (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 with the Flight Director selected.
- o (C): only after take off.

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

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

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

- o (A): at alert height.
- o (B): before flare.

- o (C): after flare.
- 677: (Q743) What are the three functional domains of IMA (Integrated Modular Avionics)?
- o (A): Cockpit, cabin and utilities.
 - o (B): Flight, navigation and systems.
 - o (C): Ground, flight and transit.
- 678: (Q466) With localizer capture, the EFIS indication is VOR/LOC in....
- o (A): white letters.
 - o (B): green letters.
 - o (C): amber letters.
- 679: (Q347) Why is a hydraulic damper fitted to a nose wheel steering system?
- o (A): to centralise the nose wheel during an up selection.
 - o (B): to reduce vibration and shimmy.
 - o (C): To centralise the nose leg assembly during an up selection.
- 680: (Q59) Which system is used to determine precise points located on an aircraft?
- o (A): frame stations, water lines and buttock lines.
 - o (B): frame stations, vertical lines and lateral lines.
 - o (C): longitudinal, vertical and lateral lines.
- 681: (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): secure communication interface.
 - o (B): ethernet gateway module.
 - o (C): open world diode.
- 682: (Q202) Where will you find taxi lights?
- o (A): In the wing leading edges.
 - o (B): In the wing root.
 - o (C): On the nose landing gear.
- 683: (Q205) Which lights are located in the passenger service units?
- o (A): Spotlights.
 - o (B): Flood lights.
 - o (C): Cabin emergency lights.
- 684: (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.
- 685: (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.

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

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

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

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

688: (Q128) Transmissions from VOR facilities may be adversely affected by...

- o (A): static interference.
- o (B): night effect.
- o (C): uneven propagation over irregular ground surfaces.

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

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

690: (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): di-electric resistivity of the fuel.
- o (B): charge of condensers.
- o (C): height of the fuel.

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

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

692: (Q61) What are water lines?

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

693: (Q431) The take-off of an aircraft is....

- o (A): flown automatically.
- o (B): not possible with go-around (GA) set on the thrust mode control panel (TMCP).
- o (C): flown manually.

694: (Q259) What type of fire detection system is a Fenwal detection system?

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

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

- (A): field voltage.
- (B): field current.
- (C): generator speed.

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

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

697: (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:

- (A): 1 and 2.
- (B): 2 and 3.
- (C): 1 and 3.

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

- (A): Avionics bay.
- (B): Engines.
- (C): Cargo bay.

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

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

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

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

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

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

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

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

703: (Q537) What is the fundamental difference between a trim tab and a servo tab?

(A): A trim tab is automatically adjusted when the particular control surface moves, a servo tab is moved independently of the particular control surface.

- 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): The purpose of a trim tab is to reduce continuous stick force to zero, a servo tab only reduces stickforce.

704: (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.

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

- o (A): the use of special conductive paint.
- o (B): special conducting or non-conducting grease.
- o (C): bonding strips.

706: (Q612) Position error:

- o (A): will usually decrease with an increase in altitude.
- o (B): will depend solely on the attitude of the aircraft.
- o (C): may be reduced by the fitting of static ports.

707: (Q46) Where is the helicopter throttle hand grip located?

- o (A): collective lever.
- o (B): cyclic stick.
- o (C): throttle box.

708: (Q536) What must you do to yaw the aircraft to the right?

- o (A): The left rudder pedal is pushed forward and the rudder moves to the left.
- o (B): The right 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 right.

709: (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.

710: (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.

711: (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.

712: (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.

713: (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): 2, 3 & 5.
- o (B): 3, 4 & 5.
- o (C): 1, 2, 3 & 5.

714: (Q570) Pressure errors which can be calculated and presented graphically in the aircraft manual include:

- o (A): Position and configuration errors.
- o (B): Configuration, maneuver and turbulence errors.
- o (C): Position and maneuver errors.

715: (Q338) The cam plate in a nose undercarriage is ...

- o (A): for alignment of the nose wheel steering on nose undercarriage extension.
- o (B): part of the shimmy damper.
- o (C): to centre the nose wheels for gear retraction.

716: (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.

717: (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.

718: (Q302) In an open-centre hydraulic system, selector valves are positioned ...

- o (A): in series.
- o (B): in parallel.
- o (C): either in series or parallel depending on the system design.

719: (Q618) An airspeed indicator has....

- o (A): static connection only.
- o (B): pitot and static connection.
- o (C): pitot connection only.

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

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

721: (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 engine power setting.

o (C): the engine throttles to maintain a constant acceleration rate.

722: (Q457) Until touchdown, auto pilot, with auto-land system....

- o (A): drives the throttles forward.
- o (B): remains engaged ready for G/A.
- o (C): disconnects after a short time.

723: (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.

724: (Q755) Which unit lets the crew monitor and control the CSS (Cabin Services System)?

- o (A): The PCU (Passenger Control Unit).
- o (B): The CAP (Cabin Attendant Panel).
- o (C): The SDU (Smart Display Unit).

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

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

726: (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): Coupling has occurred and system provides control data to capture the centerline.
- o (C): Localizer is armed and coupling will occur when flag warning disappears.

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

- o (A): The Mach number at which compressibility effects first appear.
- o (B): The Mach number at which sonic flow is first achieved.
- o (C): The Mach number at which shock waves are formed at the leading edge of the airfoil.

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

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

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

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

730: (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): FANS (Future Air Navigation Systems).

- o (C): ATIS (Automatic Terminal Information System).
- 731: (Q228) What is the benefit of injecting water in the ram air duct?
- o (A): Make the cabin air less dry.
 - o (B): Cool the air cycle machine.
 - o (C): Improve the efficiency of the heat exchanger.
- 732: (Q160) What is the nominal voltage of a NiCad battery cell?
- o (A): 24 volts.
 - o (B): 1.2 volts.
 - o (C): 2 volts.
- 733: (Q31) The angle of attack of a blade is the
- o (A): angle between the aircraft longitudinal axis and relative air flow.
 - o (B): angle between the chord line and plane of rotation.
 - o (C): angle between the chord line and relative airflow.
- 734: (Q184) Which of the following is NOT part of a three-unit voltage regulator?
- o (A): Current limiter.
 - o (B): Reverse current relay.
 - o (C): Open phase protection.
- 735: (Q389) The Altitude Select System:
- o (A): Disengages autopilot Auto Trim at selected altitude.
 - o (B): Is annunciated by light and/or sound when airplane is approaching selected altitude.
 - o (C): Engages autopilot Auto Trim at selected altitude.
- 736: (Q276) Which Halon type doesn't use a pressurisation agent?
- o (A): Halon 1001.
 - o (B): Halon 1301.
 - o (C): Halon 1211.
- 737: (Q231) A large aircraft air conditioning system's cabin temperature control....
- o (A): involves modulating the pack valve.
 - o (B): is selectable for each zone individually from the flight deck.
 - o (C): all zone temperatures are controlled from one master switch.
- 738: (Q456) Purpose of an autoland decrabbing manoeuvre is to
- o (A): point the aircraft down the runway at touch down.
 - o (B): assist with localiser tracking.
 - o (C): assist with glide slope tracking.
- 739: (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 absolute barometric pressure from a static source on the fuselage.
 - o (C): Measurement of elapsed time for a radio signal transmitted to the ground surface and back.
- 740: (Q357) How does an 'on board oxygen generation system' (OBOGS) produce oxygen?

- o (A): By electrolysis of water.
- o (B): By using molecular filters.
- o (C): By using sodium chloride.

741: (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.

742: (Q307) Which component in a hydraulic system ensures immediate response when a service is selected?

- o (A): accumulator.
- o (B): selector.
- o (C): engine driven pump.

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

- o (A): Yes.
- o (B): Only when the temperature is lower than 10 degrees C.
- o (C): It has no influence on the pressure in a fire bottle.

744: (Q337) What is a stripe or mark extending from the rim of a wheel onto the tire?

- o (A): Indicates the tire is a high-pressure type.
- o (B): A balance mark.
- o (C): A creep mark.

745: (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.

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

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

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

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

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

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

749: (Q192) Transformer rectifiers are used for:

- o (A): Converting DC into AC.
- o (B): Converting AC into DC.

o (C): Boosting the output voltage from 28V to 110V.

750: (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.

751: (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.

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

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

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

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

754: (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 over-read by a constant amount.
- o (C): Will progressively under-read.

755: (Q596) The case of an airspeed indicator is fed with:

- o (A): Pitot pressure only.
- o (B): Dynamic pressure only.
- o (C): Static pressure only.

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

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

757: (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 away from the receiver.
- o (B): and receiver move towards each other.
- o (C): moves toward the receiver.

758: (Q610) While carrying out a leak check of the altimeter, if the static is leaking, the VSI would:

- o (A): indicate climb.
- o (B): indicate decent.
- o (C): not be affected.

759: (Q387) An autopilot closed loop control....

- o (A): is for stabilisation only.
- o (B): is controlled by the AP mode control unit.
- o (C): has no feedback data.

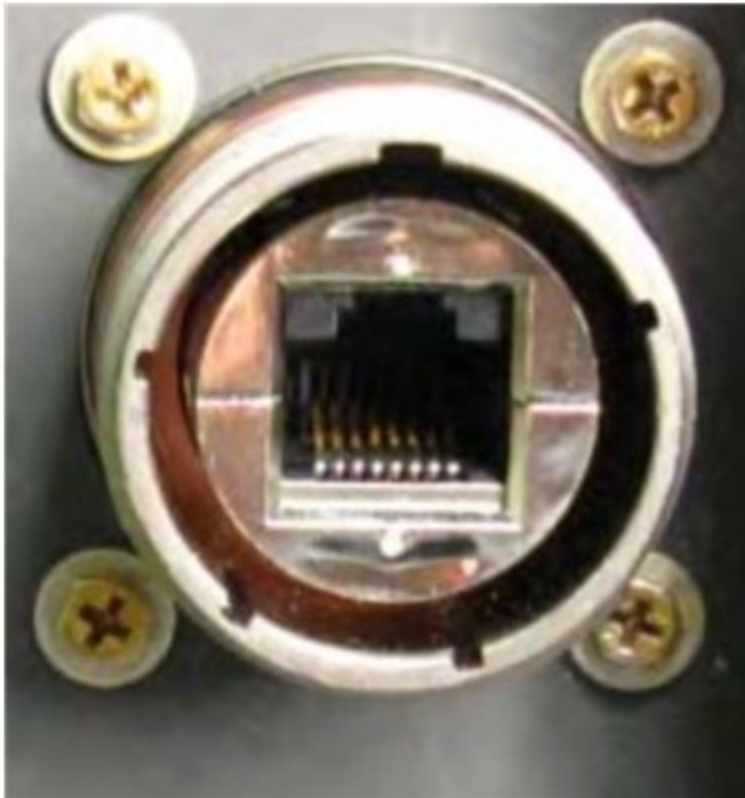
760: (109) The HFmatches the antenna impedance to the transceiver output over the HF frequency range.

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

761: (Q693) A stall warning system is based on a measure of:

- o (A): Airspeed.
- o (B): Groundspeed.
- o (C): angle of airflow sensor and flap position transmitter.

762: (Q741) This is a(n).... (See the figure)



o (A): Ethernet port.

- o (B): Quadrax port.
- o (C): RJ45 port.

763: (Q642) The artificial horizon uses:

- o (A): a horizontally controlled gyro.
- o (B): a rate or restrained gyro.
- o (C): a gravity controlled gyro.

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

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

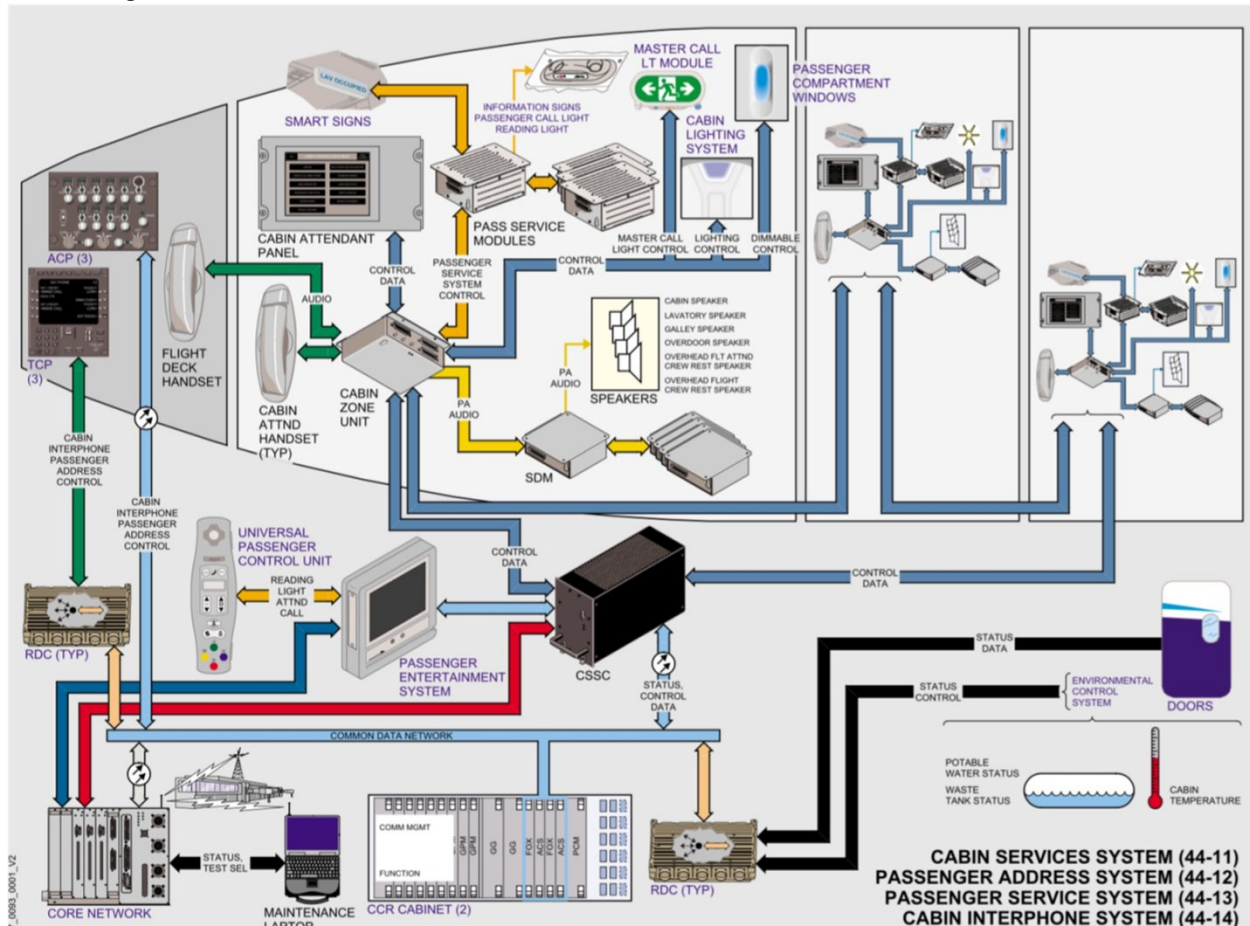
765: (Q561) Density varies:

- o (A): directly with temperature and pressure.
- o (B): directly with pressure and inversely with temperature.
- o (C): inversely with pressure and directly with temperature.

766: (Q538) Aircraft flight control trim systems must be designed and installed so that the....

- o (A): trim system will disengage or become inoperative if the primary flight control system fails.
- o (B): operating control and the trim tab will always move in the same direction.
- o (C): pilot can determine the relative position of the trimtab from the cockpit.

767: (Q756) The information signs are controlled from the cabin configuration software inside the....
(See the figure)



- o (A): Passenger Control Unit.
- o (B): Cabin Services System Controller.
- o (C): Cabin Attendant Panel.

768: (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.

- (A): 2, 3 and 4.
- (B): 1, 2 and 4.
- (C): 1, 2 and 3.

769: (Q721) Helicopter rotor track and balance is done by

- (A): the 'Damage Tolerance Monitoring System'.
- (B): the 'Low Cycle Fatigue Counter'.
- (C): the 'HUMS' (Health and Usage Monitoring System).

770: (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 ...

- (A): 3000 PSI.
- (B): 1000 PSI.
- (C): 4000 PSI.

771: (Q40) What is the ability of the rotor blade to move up and down called?

- (A): flapping.
- (B): feathering.
- (C): dragging.

772: (Q189) What is the primary function of a current transformer in an aircraft?

- (A): Measure voltage in an electrical circuit.
- (B): Measure current in an electrical circuit.
- (C): Step-up the current in a circuit.

773: (Q602) The purpose of the altitude alert system is to generate a visual and aural warning to the pilot when the:

- (A): airplane altitude differs from a selected altitude.
- (B): proximity to the ground becomes dangerous.
- (C): altimeter setting differs from the standard setting above the transition altitude.

774: (Q551) In which control system will an artificial feel system be required?

- (A): Power operated control system.
- (B): Power assisted control system.
- (C): Aerodynamically controlled system.

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

- (A): serviceable mode S or SSR transponder.
- (B): SELCAL system.
- (C): DME system.

776: (Q696) The input to a basic stall warning system is:

- (A): Slat/flap position.
- (B): IAS.

o (C): Angle of attack.

777: (Q503) ARINC 429 SDI word format is at bits

o (A): 9 - 10

o (B): 1 - 8

o (C): 31 - 32

778: (Q455) The order of autoland approach is

o (A): LOC, GS, ATT HOLD, FLARE

o (B): LOC, GS, FLARE, ATT HOLD

o (C): GS, LOC, ATT HOLD, FLARE