

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.

Note: This exam is for if you are going for your Module 13 certificate but already have your certificate for Module 11!!!

- 1: (Q34) How does a rotor generate lift?
 - o A: down-wash below the blade.
 - o B: high pressure above the blade.
 - C: low pressure above the blade.

- 2: (Q43) How does collective control input affect the pitch of the blades?
 - A: increases the pitch angle the same amount on all blades.
 - o B: increases the angle on the advancing blade and reduces it on the retreating one.
 - o C: increases the angle on the retreating blade and reduces it on the advancing one.

- 3: (Q395) The GA mode is usually initiated by....
 - o A: pressing a button on the autopilot control panel.
 - o B: making a selection on the mode control panel.
 - C: pressing a button on thrust levers.

- 4: (Q377) To carry out an autopilot check first
 - o A: switch on NAV receivers.
 - B: ensure all control surfaces are unobstructed.
 - o C: switch off all power.

- 5: (Q427) The application of normal forces on the control column with the autopilot engaged is called....
 - o A: touch control steering.
 - B: control wheel steering.
 - o C: parallel connected system.

- 6: (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).
 - C: ADI (Attitude Director Indicator).

- 7: (Q383) A single axis autopilot may also be called:
 - o A: auto stabilisation loop.
 - o B: altitude hold.
 - C: wing leveller.

- 8: (Q386) Autopilot disengagement is....
 - o A: an aural warning only.
 - o B: a caution light and an aural warning.
 - C: an aural warning and flashing light.

- 9: (Q385) An automatic flight control system:

- A: is another name for an autopilot system.
 - o B: applies flight data to the auto pilot system.
 - o C: can only be used in EFIS equipped aircraft.
- 10: (Q382) A single axis autopilot system provides....
- o A: control about the pitch axis.
 - o B: stabilisation about the normal axis.
 - C: control about the roll axis.
- 11: (Q409) When the aircraft nose yaws to the left, the yaw damper will apply corrective rudder to
- A: the right.
 - o B: the left with some aileron assistance.
 - o C: the left.
- 12: (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.
 - B: a three axis autopilot system.
 - o C: INS inputs to the CADC.
- 13: (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.
 - C: can survive the first failure and reverts to manual control in the event of a second failure.
- 14: (Q413) A Stability Augmentation System (SAS) is a rate damping system that will:
- A: All of the answers.
 - o B: Stop unwanted rate of motion from developing.
 - o C: Gives good control and handling characteristics.
- 15: (Q421) An automatic pitch trim system employs a separate pitch trim servomotor which operates....
- A: in parallel with the autopilot pitch control servo.
 - o B: as a stand-alone system.
 - o C: in series with the autopilot pitch control servo.
- 16: (Q432) The fixed trim tab....
- o A: is manually controlled from the cockpit.
 - B: is adjusted by bending.
 - o C: is riveted to the leading edge.
- 17: (Q420) Automatic mach trim is functional in the....
- A: pitch channel only with the autopilot engaged.
 - o B: pitch channel only with the autopilot disengaged.
 - o C: pitch and roll channel with the autopilot engaged.
- 18: (Q426) Mode 'Localizer ARM' active on Flight Director means:
- o A: Coupling has occurred and system provides control data to capture the centerline.

- o B: Localizer is armed and coupling will occur when flag warning disappears.
 - C: System is armed for localizer approach and coupling will occur upon capturing center line.
- 19: (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.
 - C: indicated airspeed (IAS) is maintained constant by the autopilot by means of elevator.
- 20: (Q424) When the bank angle limit is applied to the autopilot , it means
- o A: the max aileron angle that can be commanded.
 - o B: maximum rudder deflection.
 - C: the max roll angle that can be demanded by the autopilot.
- 21: (Q430) The flight director is displayed on the....
- o A: EHSI
 - o B: bearing indicator
 - C: EADI
- 22: (Q433) Auto-throttle engaged mode can be checked by the pilot, using:
- A: primary flight display.
 - o B: position of throttles.
 - o C: thrust control computer.
- 23: (Q446) In order to know in which mode the autothrottles are engaged, the crew will check the:
- A: PFD (Primary Flight Display).
 - o B: throttles position.
 - o C: ND (Navigation Display).
- 24: (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, 2 and 6.
 - C: 1, 4 and 5.
- 25: (Q457) Until touchdown, auto pilot, with auto-land system....
- A: remains engaged ready for G/A.
 - o B: disconnects after a short time.
 - o C: drives the throttles forward.
- 26: (Q423) The flare manoeuvre may be controlled by signals from
- A: radio altimeter.
 - o B: the localiser receiver.
 - o C: the glide slope receiver.
- 27: (Q450) Overshoot or go-around mode can be initiated....
- o A: at any time.
 - B: below 2000 feet radio altitude.

- o C: only when autopilot is engaged.
- 28: (Q85) Ionization in the atmosphere is produced chiefly by which of the following types of radiation?
- o A: cosmic radiation.
 - B: ultraviolet radiation.
 - o C: Alpha radiation.
- 29: (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: ionospheric storms.
 - B: temperature inversions.
 - o C: low cloud masses.
- 30: (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: Increase.
 - o B: Decrease.
 - C: None.
- 31: (Q74) Radio-frequency waves cannot be seen for which of the following reasons?
- 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.
- 32: (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.
- A: 720 - 25 kHz
 - o B: 2280 - 50 kHz
 - o C: 360 - 8.33 kHz
- 33: (Q108) The HF (high frequency) range of the radio spectrum is the band extending from
- o A: 300 MHz to 3 GHz
 - o B: 30 MHz to 300 MHz.
 - C: 2 - 30 MHz
- 34: (Q106) Satisfactory two-way VHF communication can typically be maintained up to miles, this range dependent on the aircraft height.
- o A: 2000
 - B: 200
 - o C: 20
- 35: (109) The HFmatches the antenna impedance to the transceiver output over the HF frequency range.
- o A: transceiver
 - B: antenna coupler
 - o C: FDAU (Flight data acquisition unit)

36: 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 3.
- o B: 1, 2 and 4.
- o C: 1 and 4.

37: (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: 108.10 MHz
- C: 406.025 MHz

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

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

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

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

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

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

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

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

42: (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.
- B: pulse pairs are discreet to a particular aircraft.
- o C: pulse pairs are amplitude modulated with the aircraft registration.

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

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

44: (Q132) In an ADF system, night effect is most pronounced:

- o A: when the aircraft is at high altitude.
- B: at dusk and dawn.
- o C: during long winter nights.

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

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

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

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

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

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

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

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

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

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

50: (Q156) Which of the following lists all the parameters that can be determined by a GPS receiver tracking signals from 4 different satellites?

- A: Latitude, longitude, altitude and time.
- o B: Latitude and longitude.
- o C: Latitude, longitude and altitude.

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

- o A: 6 (90° apart)
- o B: 8
- C: 4

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

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

53: (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.
- B: (1) relative motion - (2) decrease - (3) apart.
- o C: (1) apparent moving - (2) decrease - (3) together.

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

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

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

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

56: (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.
- C: bonding strips.

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

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

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

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

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

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

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

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

61: (Q499) An ARINC 429 bus uses

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

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

- o A: Boarding Music.
- B: Announcement from the flight compartment.
- o C: Announcement from an attendant.

- 63: (Q530) How does the IFES (In-Flight Entertainment System) send audio and video signals?
- o A: A standard 1 Gbit/s fast Ethernet LAN.
 - o B: Fibre optics.
 - C: A standard 100 Mbit/s fast Ethernet LAN.
- 64: (Q714) Information updates to the airborne system and communications between the ground based and airborne systems are accomplished ...
- 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.
- 65: (Q706) One of the advantages of the OMS (Onboard Maintenance System) is ...
- A: to detect and report failure.
 - o B: to replace the tech log.
 - o C: to help the pilots do a minor maintenance task.
- 66: (Q710) Data loading is a....
- o A: reading information facility.
 - B: reading or writing information facility.
 - o C: writing information facility.
- 67: (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.
 - C: 1, 2, 3, 4 and 5.
- 68: (Q719) The printer used in the cockpit is....
- o A: an inkjet printer.
 - o B: a laser printer.
 - C: a dot matrix printer.
- 69: (Q721) Helicopter rotor track and balance is done by
- A: the 'HUMS' (Health and Usage Monitoring System).
 - o B: the 'Low Cycle Fatigue Counter'.
 - o C: the 'Damage Tolerance Monitoring System'.
- 70: (Q720) A permanent monitoring of the vertical acceleration (G-force) of an aircraft during landing is a part of....
- o A: the 'HUMS' (Health and Usage Monitoring System).
 - o B: the 'Low Cycle Fatigue Counter'.
 - C: the 'Damage Tolerance Monitoring'.
- 71: (Q737) Airplane system data critical to flight are connected to the..... In the Core Network System.
- A: Isolated Data Network (IDN).
 - o B: Open Data Network (ODN).
 - o C: Common Data Network (CDN).

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



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

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

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

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

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

75: (Q772) A passenger with a laptop can access to e-mail and internet applications in the...

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

76: (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.
- B: open world diode.
- o C: ethernet gateway module.

77: (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 specific status message.
- B: A maintenance memo.
- o C: A scheduled fault message.

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

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

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

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