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: (Q31) The angle of attack of a blade is the
- o A: angle between the chord line and plane of rotation.
- o B: angle between the aircraft longitudinal axis and relative air flow.
- o C: angle between the chord line and relative airflow.

2: (Q46) Where is the helicopter throttle hand grip located?
- o A: cyclic stick.
- o B: throttle box.
- o C: collective lever.

3: (Q404) Automatic flight systems may be capable of controlling the aircraft flight in:
- o A: azimuth and elevation only.
- o B: azimuth and velocity only.
- o C: azimuth, elevation and velocity.

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

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

6: (Q381) The position of a Flight Director command bars:
- o A: indicates the manoeuvers to execute, to achieve or maintain a flight situation.
- o B: only displays information relating to radio-electric deviation.
- o C: enables the measurement of deviation from a given position.

7: (Q384) A three-axis auto pilot is....
- o A: a system which will maintain a preselected altitude.
- o B: an auto stabilisation system.
- o C: a system which will maintain a preselected airspeed.

8: (Q393) Which modes are incompatible?
- o A: HDG + V/S HOLD
- o B: G/S + ALTITUDE HOLD
- o C: VOR + ALTITUDE HOLD

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

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

10: (Q385) An automatic flight control system:
- o A: can only be used in EFIS equipped aircraft.
- o B: is another name for an autopilot system.
- o C: applies flight data to the auto pilot system.

11: (Q411) An aircraft has yaw damping included in its auto stabilisation system. An essential requirement of such system is:
- o A: a three axis autopilot system.
- o B: series connected servo motors.
- o C: INS inputs to the CADC.

12: (Q407) Which airplane behavior will be corrected by a yaw damper?
- o A: Dutch roll.
- o B: Spiral dive.
- o C: Tuck under.

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.
- o 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:
- o A: Stop unwanted rate of motion from developing.
- o B: All of the answers.
- o C: Gives good control and handling characteristics.

15: (Q420) Automatic mach trim is functional in the....
- o A: pitch channel only with the autopilot disengaged.
- o B: pitch channel only with the autopilot engaged.
- o C: pitch and roll channel with the autopilot engaged.

16: (Q416) Automatic trim is used to....
- o A: allow full authority to be regained by the aileron.
- o B: prevent loads on the elevator trims.
- o C: maintain level flight.

17: (Q421) An automatic pitch trim system employs a separate pitch trim servomotor which operates....
- o A: in parallel with the autopilot pitch control servo.
- o B: in series with the autopilot pitch control servo.
- o C: as a stand-alone system.

18: (Q430) The flight director is displayed on the....
- o A: EADI

- o B: bearing indicator
- o C: EHSI

19: (Q424) When the bank angle limit is applied to the autopilot , it means
- o A: maximum rudder deflection.
- o B: the max aileron angle that can be commanded.
- o C: the max roll angle that can be demanded by the autopilot.

20: (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.

21: (Q433) Auto-throttle engaged mode can be checked by the pilot, using:
- o A: primary flight display.
- o B: position of throttles.
- o C: thrust control computer.

22: (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: true airspeed (TAS) is maintained constant by the auto-throttle system.
- o B: calibrated airspeed (CAS) is maintained constant by the autopilot by means of elevator.
- o C: indicated airspeed (IAS) is maintained constant by the autopilot by means of elevator.

23: (Q438) An automatic throttle, engaged in the EPR mode, will control
- o A: the engine throttles to maintain a constant acceleration rate.
- o B: the aircraft altitude to maintain constant engine input pressure.
- o C: the engine throttles to maintain a constant engine power setting.

24: (Q443) When GA is initiated?
- o A: Auto throttle remains engaged allowing pilot to control the throttles.
- o B: Auto throttle remains engaged giving correct G/A thrust.
- o C: Auto throttle disengages at 2000 ft/min rate and wings will level.

25: (Q462) In triplex autoland system failure of one channel will
- o A: disconnect the failure channel and continue with a manual approach.
- o B: disconnect all channels.
- o C: disconnect the failure channel and continue autoland approach.

26: (Q453) Before an aeroplane is able to make an automatic landing the
- o A: ground radio aids must be at CAT II.
- o B: ground radio aids must be at least CAT I.
- o C: ILS system must be working.

27: (Q457) Until touchdown, auto pilot, with auto-land system....
- o A: remains engaged ready for G/A.
- o B: drives the throttles forward.
- o C: disconnects after a short time.

28: (Q74) Radio-frequency waves cannot be seen for which of the following reasons?
- o A: Because radio-frequency waves are below the sensitivity range of the human eye.
- o B: Because radio-frequency energy is low powered.
- o C: Because radio-frequency waves are above the sensitivity range of the human eye.

29: (Q87) Compared to the other ionospheric layers at higher altitudes, the ionization density of the D layer is
- o A: relatively low.
- o B: relatively high.
- o C: about the same.

30: (Q81) What will be the effect on the wavelength of radio wave if the frequency increases? The wavelength....
- o A: is not influenced.
- o B: will decrease.
- o C: will increase.

31: (Q91) Which irregular variation in ionospheric conditions can cause a waiting period of several days before communications return to normal?
- o A: Sudden ionospheric disturbance.
- o B: Ionospheric storms.
- o C: Sporadic E

32: (Q107) A squelch circuit disables the receiver output, ...
- o A: when no signals are being received so preventing noise being fed to the crew headsets between ground transmissions.
- o B: when a SELCAL is received from ground stations equipped with a coding device.
- o C: when satcom is selected.

33: (Q102) The VHF (very high frequency) range of the radio spectrum is the band extending from
- o A: 300 to 3000 MHz.
- o B: 3 to 30 GHz
- o C: 30 MHz to 300 MHz.

34: (109) The HF .....matches the antenna impedance to the transceiver output over the HF frequency range.
- o A: FDAU (Flight data acquisition unit)
- o B: antenna coupler
- o C: transceiver

35: (Q108) The HF (high frequency) range of the radio spectrum is the band extending from
- o A: 300 MHz to 3 GHz
- o B: 2 - 30 MHz
- o C: 30 MHz to 300 MHz.

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

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

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

38: (Q117) The Cockpit Voice Recorder of a large transport aircraft will always store the last....
- o A: 60 minutes.
- o B: 30 minutes.
- o C: 120 minutes.

39: (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.

40: (Q119) On an ILS approach what will cause the aircraft to fly onto the beam?
- o A: Radio deviation.
- o B: Glideslope deviation.
- o C: Course deviation.

41: (Q120) What is the glide slope frequency range?
- o A: 108 - 112 Mhz.
- o B: 329 - 335 Mhz.
- o C: 108 - 112 Ghz.

42: (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.

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

44: (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.

45: (Q140) The IRS position can be initialized....
- o A: on the ground and in flight with VOR/DME.
- o B: on the ground only.
- o C: at designated positions en-route and on the ground.

46: (Q148) If one FMS fails in a dual system
- o A: FMS CDU on fail side goes blank.
- o B: FMS display transfers data automatically from serviceable computer.
- o C: system operation will not be affected.

47: (Q144) Which of the following is the FMS normal operating condition in the cruise?
- o A: LNAV only
- o B: LNAV and VNAV.
- o C: LNAV or VNAV.

48: (Q143) What is an FMC?
- o A: A flight management computer.
- o B: A flight management inertial reference system.
- o C: An autopilot/flight director system.

49: (Q157) Which of the following combinations of satellite navigation systems provide the most accurate position fixes in air navigation?
- o A: GLONASS and COSPAS-SARSAT.
- o B: NAVSTAR/GPS and GLONASS.
- o C: NNSS-Transit and GLONASS.

50: (Q155) What is the minimum number of satellites required for a Satellite-Assisted Navigation System (GNSS/GPS)?
- o A: 3
- o B: 2
- o C: 4

51: (Q151) How many satellites are required for GNSS?
- o A: 4
- o B: 6 (90° apart)
- o C: 8

52: (Q468) The ATC altitude information is relative to....
- o A: 29.92 bar level.
- o B: 1013.2 mbar level.
- o C: 10.92 mbar level.

53: (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.

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

55: (Q479) A mode C transponder
- o A: cannot be used for TCAS II.
- o B: can be used for TCAS on ILS approach only.
- o C: can be used for TCAS II.

56: (Q482) What does the Radar contour button do?
- o A: Alter the display presentation.
- o B: Alter the video amplifier.
- o C: Alter the transmitter power.

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

58: (Q490) For most radio altimeters, when a system error occurs during approach the
- o A: Height indication is removed.
- o B: DH lamp flashes red.
- o C: DH lamp flashes red and the audio signal sounds.

59: (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, 3 and 5.
- o B: 1, 2, 3, 4 and 5.
- o C: 2, 4 and 5

60: (Q504)ACARS messages are sent from the aircraft via:
- o A: a VHF communication transceiver.
- o B: GNSS.
- o C: an UHF communication transceiver.

61: (Q502) In an ARINC 429 wordstring, bits 1 to 8 represent the
- o A: destination LRU address.
- o B: source of message.
- o C: information contained in the data word.

62: (Q525) The PA amplifier sets the priority for the audio inputs. Which has the highest priority?
- o A: Boarding Music.

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

63: (Q523) An aircraft with two passenger decks with more than 100 seats per deck is equipped with....
- o A: 4 megaphones.
- o B: 3 megaphones.
- o C: 1 megaphone.

64: (Q714) Information updates to the airborne system and communications between the ground based and airborne systems are accomplished ...
- o A: automatically by update from the ECAM.
- o B: through the Gate-link concept.
- o C: by an aircraft engineer updating the system either by a floppy disc, a CD or even a hard disk.

65: (Q711) A FMS navigation database is updated
- o A: once a month.
- o B: at the operators request.
- o C: every 28 days.

66: (Q709) Where is the loaded software held?
- o A: CMC (Central Maintenance Computer) storage device, ready to be reinstalled should something happen that corrupts a particular program.
- o B: On the flight deck, ready to be reinstalled should something happen that corrupts a particular program.
- o C: In a centralized maintenance cabinet, ready to be send and reinstalled should something happen that corrupts a particular program.

67: (Q713) Which system provides airline flight, maintenance, and cabin crews with instantaneous access to operational manuals, procedures and navigation charts?
- o A: FMS (Flight Management System).
- o B: OMS (Onboard Maintenance System).
- o C: ELS (Electronic Library System).

68: (Q718) Defects of the printer are notified ...
- o A: by a fault report to the CMC (Central Maintenance Computer).
- o B: by a fault report to the CDU (Control Display Unit).
- o C: by way of lamps on the front of the panel itself.

69: (Q721) Helicopter rotor track and balance is done by
- o A: the 'Low Cycle Fatigue Counter'.
- o B: the 'Damage Tolerance Monitoring System'.
- o C: the 'HUMS' (Health and Usage Monitoring System).

70: (Q723) Maintenance Information at an out-station can be read from the....
- o A: CDU (Control Display Unit).
- o B: FMS (Flight Management system).
- o C: Electronic library system.

71: (Q743) What are the three functional domains of IMA (Integrated Modular Avionics)?
- o A: Ground, flight and transit.
- o B: Cockpit, cabin and utilities.
- o C: Flight, navigation and systems.

72: (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: AFDX switches.
- o B: ARINC 664 remote switches.
- o C: Remote Data Concentrators.

73: (Q746) The In-seat audio and video channels and volume can be selected and adjusted by the passenger using the….
- o A: IFES AMCU (Advanced Master Control Unit).
- o B: IFES PCU (passenger control unit).
- o C: IFES SC (In-flight Entertainment System System Controller).

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

75: (Q755) Which unit lets the crew monitor and control the CSS (Cabin Services System)?
- o A: The PCU (Passenger Control Unit).
- o B: The SDU (Smart Display Unit).
- o C: The CAP (Cabin Attendant Panel).

76: (Q763) Data on the USB keys (for data loading) is stored under the …
- o A: ARINC 429 format.
- o B: ARINC 629 format.
- o C: ARINC 615A format.

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

78: (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: crew information system.
- o C: central maintenance computing function.

79: (Q773) Which communication system let the flight crew request and obtain information about meteorological parameters (weather, wind, visibility, clouds,….)?
- o A: FANS (Future Air Navigation Systems).

- B: ATIS (Automatic Terminal Information System).
- C: Automatic Dependent Surveillance Broadcast