# Question block created by wizard

**This exam contains 96 questions.**

**1.** The command bars of a flight director are generally represented on an:

a. RMI (Radio Magnetic Indicator).
b. HSI (Horizontal Situation Indicator).
c. ADI (Attitude Director Indicator).

**2.** A full operational autopilot system will ensure that

a. the automatic pilot will automatically cause the aircraft to overshoot if any failure is detected.
b. the aircraft will continue its automatic landing in the event of a single failure.
c. the automatic pilot will automatically disengage whenever any failure is detected.

**3.** To carry out an autopilot check first

a. switch on NAV receivers.
b. switch off all power.
c. ensure all control surfaces are unobstructed.

**4.** With the autopilot engaged in the ALT mode the Captain alters the barometric setting. The aircraft :

a. changes its altitude in accordance with the change in pressure setting.
b. maintains its altitude.
c. trips out of altitude hold.

**5.** What is the controlling factor in the automatic flare mode?

a. Decision height.
b. Radio altimeter.
c. Localizer signal.

**6.** The GA mode is usually initiated by....

a. pressing a button on thrust levers.
b. pressing a button on the autopilot control panel.
c. making a selection on the mode control panel.

**7.** Overshoot or go-around mode can be initiated

a. at any time after auto-land has been engaged.
b. only when the auto-approach mode is activated.
c. at any time.

**8.** During approach, roll out mode occurs....

a. before flare.
b. after flare.
c. at alert height.

**9.** The purpose of a yaw damper is to

a. block the Dutch roll frequency.
b. produce a co-ordinated turn.
c. assist the aerodynamic response.

**10.** When the aircraft nose yaws to the left, the yaw damper will apply corrective rudder to

a. the right.
b. the left.
c. the left with some aileron assistance.

**11.** A dual-dual stability augmentation system:

a. ensures that a lane failure results in that the actuators remains at their position when the failure occurred.
b. can survive the first failure and reverts to manual control in the event of a second failure.
c. disengages when a failure occurs and the system reverts to manual control.

**12.** A duplex SAS (Stability Augmentation System) architecture ensures that a lane failure results in....

a. only a passive failure, that is, the output of the two lane actuators remains at the position it was in at the time of failure.
b. a setting which limits the movement of the two lane actuators.
c. a passive failure with the system reverting to manual operation.

**13.** Automatic Mach trim is functional in the....

a. pitch channel only with the autopilot engaged.
b. pitch channel only with the autopilot disengaged.
c. pitch and roll channel with the autopilot engaged.

**14.** In the automatic trim control system of an autopilot, automatic trimming is normally effected about the :

a. pitch, roll and yaw axes.
b. pitch and roll axes only.
c. pitch axis only.

**15.** The purpose of an airplane automatic trim system is to trim out the hinge moment of the :

a. elevator(s), rudder(s) and ailerons.
b. elevator(s) and rudder(s).
c. elevator(s).

**16.** The take-off of an aircraft is....

a. flown manually.
b. not possible with go-around (GA) set on the trust mode control panel (TMCP).
c. flown automatically.

**17.** The fixed trim tab....

a. is riveted to the leading edge.
b. is adjusted by bending.
c. is manually controlled from the cockpit.

**18.** Mode "Localizer ARM" active on Flight Director means:

a. System is armed for localizer approach and coupling will occur upon capturing centre line.
b. Coupling has occurred and system provides control data to capture the centreline.
c. Localizer is armed and coupling will occur when flag warning disappears.

**19.** Central Air Data Computers (CADC's) transmit data concerning

a. airspeed, altitude and decision height.
b. airspeed and altitude only.
c. airspeed, altitude and Mach number.

**20.** The flight director is displayed on the....

a. EHSI
b. EADI
c. bearing indicator

**21.** With autothrottle selected in the SPEED MODE compatible autopilot modes are

a. IAS HOLD and ALT ARM.
b. V/S and ALT ARM.
c. VOR ARM and HDG HOLD.

**22.** 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:

a. 2 and 4
b. 1 and 5
c. 1 and 4

**23.** During auto-land all autopilot channels will disconnect in....

a. triplex system.
b. dual-dual system.
c. duplex system.

**24.** With localizer capture, the EFIS indication is VOR/LOC in....

a. white letters.
b. amber letters.
c. green letters.

**25.** Overshoot or go-around mode can be initiated....

a. at any time.
b. only when autopilot is engaged.
c. below 2000 feet radio altitude.

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

a. (1) secondary - (2) FM - (3) SHF
b. (1) primary - (2) pulse - (3) SHF
c. (1) secondary - (2) pulse - (3) UHF

**27.** The special "Ident" feature (SPI-code)....

a. is to confirm SELCAL identity.
b. allows ATC to confirm aircraft identity.
c. is to confirm TCAS identity.

**28.** What is the correct response to a TCAS RA?

a. Pilots turn 90° and they follow the climb or descent commands smoothly and immediately.
b. Pilots have to follow ATC instructions as these override TCAS RA's.
c. Pilots follow the climb or descent commands smoothly and immediately.

**29.** A mode C transponder

a. can be used for TCAS on ILS approach only.
b. cannot be used for TCAS II.
c. can be used for TCAS II.

**30.** Weather Radar returns show areas of precipitation in the following colors:

a. Green, Orange, Yellow and Red.
b. Green, Yellow, Red and Magenta.
c. Green, Magenta, Blue and Red.

**31.** A radio altimeter can be defined as a....

a. self-contained on-board aid used to calculate the barometric altitude of the aircraft.
b. ground radio aid used to measure the true altitude of the aircraft.
c. self-contained on-board aid used to measure the true height of the aircraft.

**32.** A Radar altimeter system measures altitude....

a. in relation to sea level.
b. in combination with GPS-satellites
c. above terrain.

**33.** What does the term AIR-GROUND COMMUNICATION mean?

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

**34.** In which frequency band does the Microwave Landing System (MLS) operate?

a. UHF
b. SHF
c. VHF

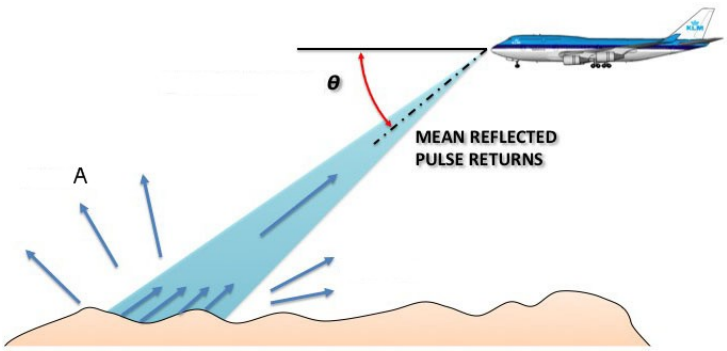
**35.** Which one of the following correctly lists the major ground based components of a Microwave Landing System (MLS)?

a. Separate azimuth and elevation transmitters, DME facility.
b. Combined azimuth and elevation transmitter, marker beacons.
c. Separate azimuth and elevation transmitters, outer and middle marker beacons.

**36.** A hyperbola is a line joining all points where the difference....

a. of distance between two fixed points is the same.
b. in time between two fixed points is different.
c. of distance between two lines is different.

**37.** How do you call the waves depicted in the figure with an A?




a. Scattered waves.
b. Deflected waves.
c. Depression waves.

**38.** 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)..

a. (1) relative motion - (2) decrease - (3) apart.
b. (1) the distance - (2) increase - (3) at the same speed.
c. (1) apparent moving - (2) decrease - (3) together.

**39.** The Doppler Navigation System is based on....

a. radio waves refraction in the ionosphere.
b. pulse shift transmission.
c. radar principles using frequency shift.

**40.** The capacity of the emergency batteries are capable of providing emergency lighting for a period of at least …

a. 10 minutes.
b. 1 hour.
c. 1 minute.

**41.** An aircraft with two passenger decks with more than 100 seats per deck is equipped with....

a. 1 megaphone.
b. 4 megaphones.
c. 3 megaphones.

**42.** Which system do you have to use if you want listen music in an aircraft?

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

**43.** The means of interacting with cabin management computers may involve using remote control devices.

What do these remote devices use for communication?

a. Either infrared (IR) or radio frequency (RF).
b. Ethernet.
c. VLF.

**44.** How are the IFES (In-Flight Entertainment System) Ethernet network set of units connected?

a. Twisted pair wires.
b. Glass Fiber connection.
c. Infrared wires.

**45.** What happens when you move the aileron control to the right?

a. the right aileron moves down and the left up.
b. the right elevator goes up and the left down.
c. the right aileron moves up and the left down.

**46.** 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.
b. The functioning of a trim tab is based on aerodynamic balancing, a servo tab in general is adjusted via a screw jack.
c. The purpose of a trim tab is to reduce continuous stick force to zero, a servo tab only reduces stick force.

**47.** What will an extended fowler flap increase?

a. Wing area and camber.
b. Wing area.
c. Wing area and aspect ratio.

**48.** In which control system will an artificial feel system be required?

a. Power assisted control system.
b. Power operated control system.
c. Aerodynamically controlled system.

**49.** What eliminates Dutch roll ?

a. The Dutch Roll damper.
b. The yaw damper.
c. The differential ailerons.

**50.** When does a stick-shaker comes into operation?

When the aircraft....

a. is approaching a stall.
b. is approaching the 'critical Mach number'.
c. goes supersonic.

**51.** 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:

a. 2 and 3
b. 3 and 5
c. 1, 4 and 5

**52.** What is the effect of a single failure of a fly-by-wire system?

a. It has no effect on the aircraft's operation.
b. It will limit the flight profile.
c. It will reduce the operational height and speed.

**53.** The rate-of-turn is the:

a. aircraft speed in a turn.
b. yaw rate in a turn.
c. change-of-heading rate of the aircraft.

**54.** Pressure measured from atmospheric pressure is called....

a. absolute pressure.
b. gauge pressure.
c. relative pressure.

**55.** Pitot pressure is a combination of:

a. Dynamic pressure and position error.
b. Static pressure and dynamic pressure.
c. Static pressure and position error.

**56.** In a servo-assisted altimeter, the secondary winding from the E-bar provides an electrical current direct to the:

a. two phase motor.
b. capsule stack.
c. amplifier of the servomotor..

**57.** Which of the following is not an error associated with the ASI?

a. Barometric pressure error.
b. Compressibility error.
c. Position error.

**58.** An encoding altimeter is a ....

a. full digital altimeter.
b. pneumatic altimeter that sends a digital code to the ATC transponder.
c. combined altimeter and airspeed indicator.

**59.** An Air Data Computer (ADC) :

a. Transforms air data measurements into electric impulses driving servo motors in instruments.
b. Measures position error in the static system and transmits this information to ATC to provide correct altitude reporting.
c. Is an auxiliary system that provides altitude information in the event that the static source is blocked.

**60.** An airspeed indicator has....

a. static connection only.
b. pitot and static connection.
c. pitot connection only.

**61.** The capacitor gauge principle is based on:

a. variation of the EMF in a Wheatstone bridge.
b. variation of capacitance by volume measure at the probe.
c. variation of capacitance of a capacitor with the nature of the dielectric.

**62.** Increasing the angular momentum of a gyro rotor will:

a. increase the gyroscopic rigidity.
b. decrease the gyroscopic rigidity.
c. have no substantial effect on gyroscopic rigidity.

**63.** With reference to a turn and bank indicator, the aircraft is in a balanced turn if:

a. the turn is indicated and the slip is zero.
b. the turn pointer and slip indicator are zero.
c. the turn pointer and slip indicator are displaced on the same side.

**64.** A slaved directional gyro derives it's directional signal from:

a. The flux valve.
b. The air data computer.
c. A direct reading magnetic compass.

**65.** The Ground Proximity Warning systems mode 1 is activated when

a. The aircraft is flying into rising terrain.
b. An excessive height loss is experienced after take-off during go-around.
c. The barometric descent rate is excessive with respect to the aircraft height above the terrain.

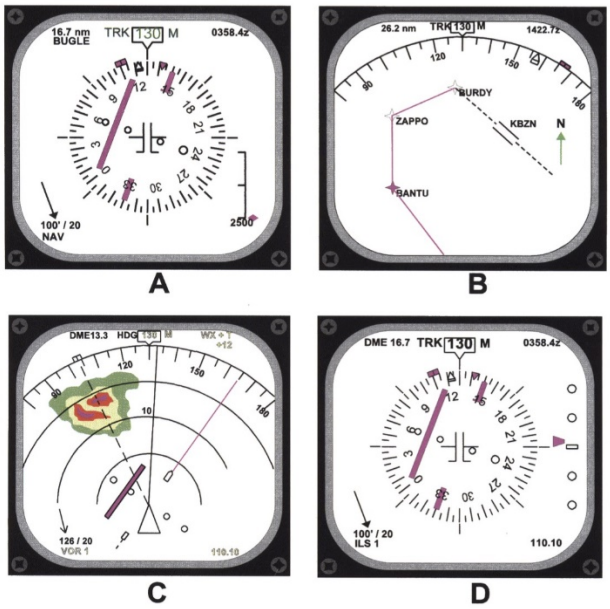
**66.** The purpose of fitting an expansion unit to a direct reading compass is to....

a. minimize liquid swirl.
b. compensate for expansion/contraction of the liquid.
c. compensate for leaks in the system.

**67.** Where in the aircraft should the FDR be fitted according to the EASA regulations?

a. In the nose landing gear bay.
b. At the rear of the aircraft.
c. In the wings.

**68.** The displays marked A, B, C and D are respectively: (See the figure)




a. A. NAV - B. PLAN - C. VOR - D. ILS
b. A. VOR - B. ILS - C. NAV - D. Plan
c. A. MAP - B. VOR - C. ILS - D. Plan

**69.** 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:

a. 2, 3 and 4.
b. 1, 2, 3, 4 and 5.
c. 1, 2 and 3.

**70.** A stall warning system is based on a measure of:

a. Airspeed.
b. angle of airflow sensor and flap position transmitter.
c. Groundspeed.

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

a. Vibration frequency expressed in Hz.
b. Vibration amplitude at a given frequency.
c. Acceleration measured by the sensors, expressed in g.

**72.** The Primary Flight Display (PFD) displays information dedicated to:

a. piloting.
b. engines and alarms.
c. systems.

**73.** One of the advantages of the OMS (Onboard Maintenance System) is …

a. to detect and report failure.
b. to help the pilots do a minor maintenance task.
c. to replace the tech log.

**74.** When a ….. is displayed, the aircraft is considered unserviceable (only specific failures are permitted to exist as stated in the MEL).

a. Status Message.
b. Fault Code.
c. Maintenance Message.

**75.** A FMS navigation database is updated

a. at the operators request.
b. every 28 days.
c. once a month.

**76.** 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.

a. 1, 2, 3 and 6.
b. 1, 2, 3, 4 and 5.
c. 1, 3, 4 and 5.

**77.** Information to be printed is sent to the printer …

a. from the FMC (Flight Management Computer).
b. from the CDU (Control Display Unit).
c. from the CMC (Central Maintenance Computer).

**78.** Which system can also be used to monitor the aircraft's structure and thus identify any faults before they cause catastrophic failure.

a. the CDU (Control Display Unit).
b. the Flight Data Recorder.
c. the Electronic library system.

**79.** Maintenance Information at an out-station can be read from the....

a. CDU (Control Display Unit).
b. FMS (Flight Management system).
c. Electronic library system.

**80.** Waste water drain mast....

a. are heated to a lower temperature with the aircraft on ground.
b. are not heated.
c. are heated to a high temperature in the air and on ground.

**81.** Communication in the integrated modular avionics network is partly standardized in…

a. ARINC 653 for the software avionics and AFDX for the data network bus.
b. ARINC 429 or AFDX (Avionics Full Duplex).
c. ARINC 429, ARINC 653 or AFDX.

**82.** The ARINC 664 Ethernet has a transport rate of …

a. 100 kilobits per second.
b. 100 gigabits per second.
c. 100 megabits per second.

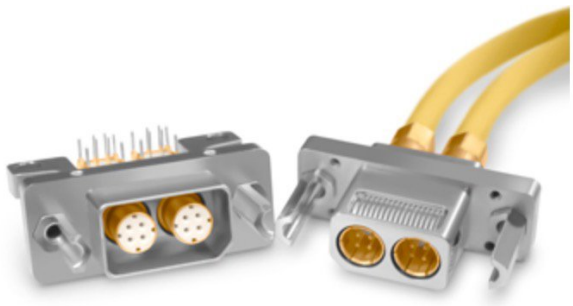
**83.** Airplane system data not critical to flight are connected to the ….. In the Core Network System.

a. Common Data Network (CDN).
b. Open Data Network (ODN).
c. Crew Wireless LAN Unit (CWLU).

**84.** The ARINC 664 Ethernet uses …

a. a pair of twisted wires with shielding around them for full duplex operation at 2 megahertz.
b. two twisted wire pairs or quad cables as the transport medium for full duplex operation at 100 megabits per second.
c. a high speed, two way, multiple terminal digital data bus operating at 2 megahertz.

**85.** This is a …. (See the figure)



a. LC connector (fibre optic).
b. Coaxial connector.
c. Quadrax connector.

**86.** The passengers can listen to the selected audio and video channels by connecting a headset to …

a. the IFES SDU (In-Flight Entertainment System Smart Display Unit).
b. the IFES RJU (Remote Jack Unit).
c. the IFES SEB (Seat Electronic Box).

**87.** Each Ethernet station is given a 48-bit address.

How are the first two fields called?

a. Parity Bit.
b. Source/destination Identifier (SDI).
c. Country Code.

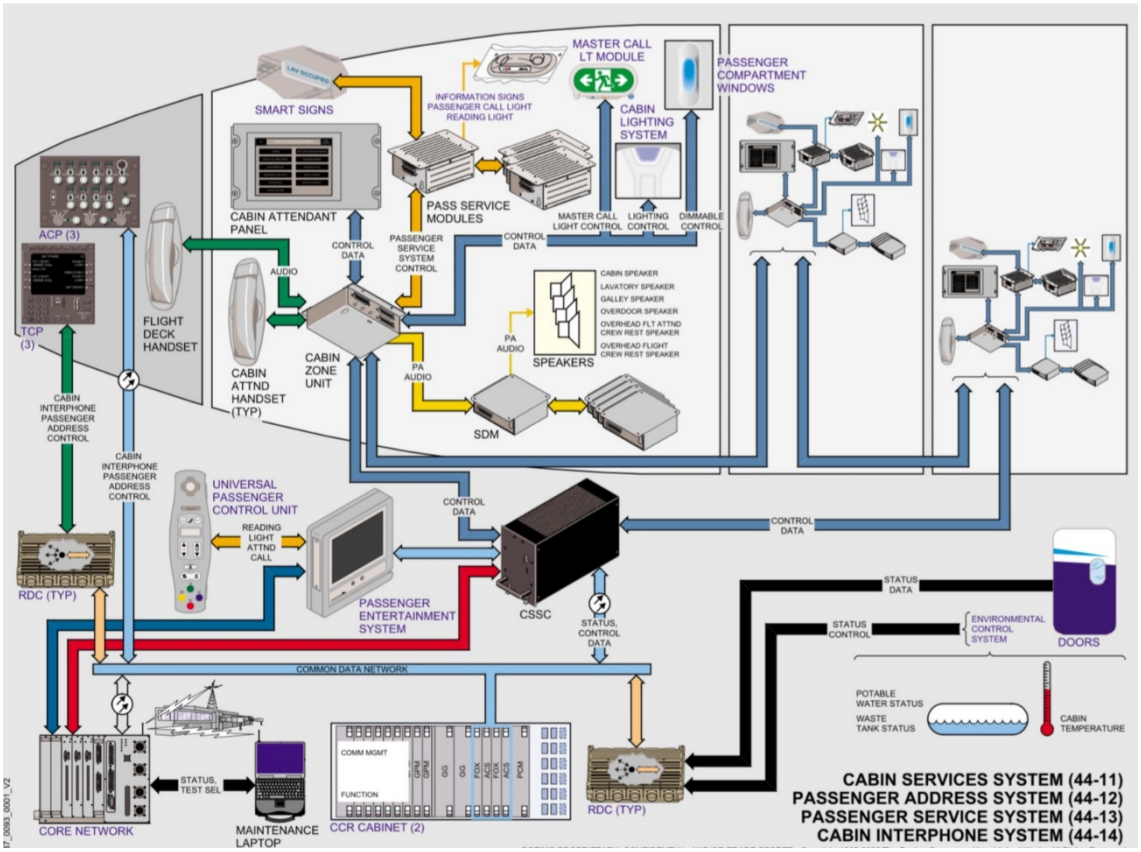
**88.** The inflight entertainment equipment is connected to …

a. the IDN (Isolated Data Network) of the Core network system.
b. the ODN (Open Data Network) of the Core network system.
c. its own network system, completely isolated from the Core network system.

**89.** Data can be transferred wirelessly from the In-flight Entertainment system on the aircraft to a terminal receiving station on the ground through ….

a. the ATIS (Automatic Terminal Information Service).
b. the ACR (Avionics Communication Router).
c. the use of the GSM Cell Data Mode (CDM), also referred to as Cell Modem (CM).

**90.** The seating and zones are controlled from the cabin configuration software inside the …. (See figure)




a. Cabin Services System Controller.
b. Passenger Control Unit.
c. Cabin Attendant Panel.

**91.** Which item handles all of the on-demand applications available to passengers?

a. the IFES Advanced Master Control Unit (AMCU).
b. the IFES File Server.
c. the IFES Crew Panel.

**92.** Switching from avionics to flight operation domain is the OIS (On board Information System) is done by....

a. OIT side switches.
b. OIT Terminal processor unit.
c. OIT control device.

**93.** What is the main protocol of communication in the open world?

a. ARINC 429.
b. Ethernet.
c. ARINC 629.

**94.** Documentation (FCOM, MEL, AFM, CDL) is part of the …

a. Avionics Domain.
b. Communication & Cabin Domain.
c. Flight Operations Domain.

**95.** On which system are scheduled maintenance tasks shown when a time or cycle limit occurs in an airplane system?

a. only on the maintenance laptop.
b. on the maintenance laptop and the electronic flight bags.
c. on the multifunction displays, the electronic flight bags and the maintenance laptop.

**96.** Documentation for the IFE (In-Flight Entertainment) System is part of the...

a. Communication & Cabin Domain
b. Avionics Domain
c. Flight Operations Domain.