# Question block created by wizard

**This exam contains 96 questions.**

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

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

**2.** A single axis autopilot system provides....

a. control about the roll axis.
b. control about the pitch axis.
c. stabilisation about the normal axis.

**3.** An automatic flight control system:

a. applies flight data to the auto pilot system.
b. can only be used in EFIS equipped aircraft.
c. is another name for an autopilot system.

**4.** The fundamental components of an autopilot control loop are:

a. rate gyro, servo motor, torque limiter.
b. rate gyro, servomotor, error signal generator.
c. torque limiter, error signal generator, servomotor.

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

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

**6.** On aircraft an auto land during auto flare the auto throttle will

a. control throttle for a IAS.
b. reverse thrust.
c. retard the throttle.

**7.** Automatic flight systems may be capable of controlling the aircraft flight in:

a. azimuth and velocity only.
b. azimuth and elevation only.
c. azimuth, elevation and velocity.

**8.** Inputs to the rudder channels initially originate from

a. AH (altitude hold) gyro and turn and slip gyro.
b. servomotors.
c. compass gyro and turn and slip gyro.

**9.** Which airplane behavior will be corrected by a yaw damper?

a. Tuck under.
b. Dutch roll.
c. Spiral dive.

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

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

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

a. a setting which limits the movement of the two lane actuators.
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.
c. a passive failure with the system reverting to manual operation.

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

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

**13.** The purpose of Automatic Trim function in autopilot is to....

a. trim throttles to obtain smooth engine power variation.
b. control elevator trim tab in order to relieve elevator load.
c. tell the pilot when elevator trimming is required.

**14.** Automatic mach trim is functional in the....

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

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

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

**16.** When the altitude select mode is engaged on a jet transport airplane equipped with autopilot (AP) and auto-throttle (ATS) systems the....

a. calibrated airspeed (CAS) is maintained constant by the autopilot by means of elevator.
b. indicated airspeed (IAS) is maintained constant by the autopilot by means of elevator.
c. true airspeed (TAS) is maintained constant by the auto-throttle system.

**17.** When the bank angle limit is applied to the autopilot , it means

a. the max aileron angle that can be commanded.
b. the max roll angle that can be demanded by the autopilot.
c. maximum rudder deflection.

**18.** The application of normal forces on the control column with the autopilot engaged is called....

a. touch control steering.
b. control wheel steering.
c. parallel connected system.

**19.** The fixed trim tab....

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

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

**22.** During flare mode autothrottle will

a. retard throttles to idle.
b. disconnect autothrottle.
c. select reverse thrust.

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

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

**24.** On an autopilot coupled approach, GO AROUND mode is engaged:

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

**25.** If a fault is detected during an autoland approach the system will totally disconnect if it is a

a. Simplex system.
b. Triplex system.
c. Duplex system.

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

a. (1) primary - (2) pulse - (3) SHF
b. (1) secondary - (2) FM - (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.** On a TCAS 2 (Traffic Collision Avoidance System) the preventive "resolution advisory" (RA) is a "resolution advisory":

a. asking the pilot to modify effectively the vertical speed of his aircraft.
b. 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.
c. asking the pilot to modify the heading of his aircraft.

**29.** The TCAS (Traffic Collision Avoidance System) is a proximity alarm system which detects a "traffic" when the conflicting traffic is equipped with a :

a. DME system.
b. serviceable mode S or SSR transponder.
c. SELCAL system.

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

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

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

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

**32.** The aircraft radio equipment which emits on a frequency of 4400 MHz is the:

a. weather radar.
b. primary radar.
c. radio altimeter.

**33.** An ARINC 429 binary coded decimal data word occupies bits

a. 11 to 28
b. 11 to 29
c. 1 to 8

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

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

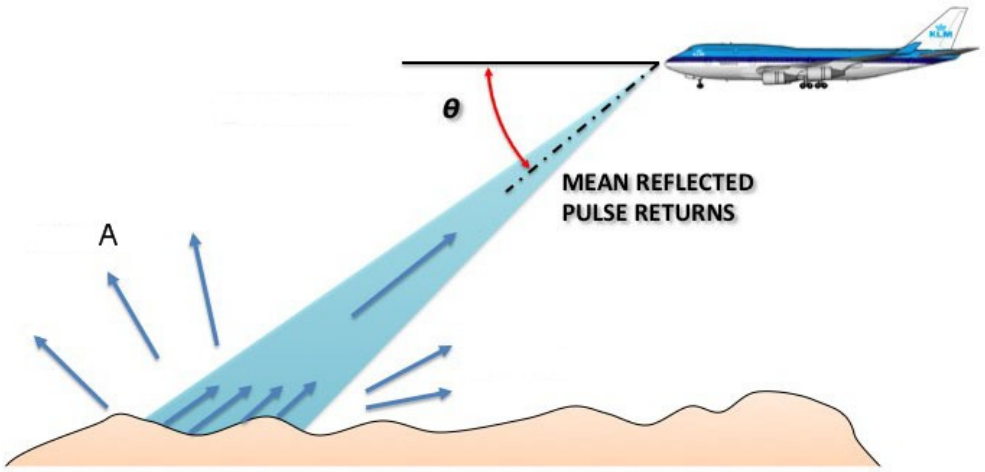
**35.** MLS installations notified for operation, unless otherwise stated, provide azimuth coverage of....

a. +or - 20° about the nominal courseline out to a range of 30 NM.
b. +or - 40° about the nominal courseline out to a range of 20 NM.
c. +or - 20° about the nominal courseline out to a range of 20 NM.

**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. Depression waves.
b. Deflected waves.
c. Scattered 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) the distance - (2) increase - (3) at the same speed.
b. (1) relative motion - (2) decrease - (3) apart.
c. (1) apparent moving - (2) decrease - (3) together.

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

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

**40.** An aircraft with two passenger decks with more than 100 seats per deck is equiped with....

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

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

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

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

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

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

What do these remote devices use for communication?

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

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

a. Glassfiber connection.
b. Twisted pair wires.
c. Infrared wires.

**45.** In a Frise aileron control system....

a. the up-going aileron produces increased drag.
b. the up-going aileron moves through a greater angle than the down going aileron.
c. the down-going aileron leading edge protrudes into the airflow.

**46.** What is the fundamental difference between a trim tab and a servo tab?

a. The purpose of a trim tab is to reduce continuous stick force to zero, a servo tab only reduces stickforce.
b. A trim tab is automatically adjusted when the particular control surface moves, a servo tab is moved independently of the particular control surface.
c. The functioning of a trim tab is based on aerodynamic balancing, a servo tab in general is adjusted via a screw jack.

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

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

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

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

**49.** A yaw damper is....

a. an elevator augmentor.
b. a rudder damper designed to avoid the “dutch roll”.
c. an elevator augmentor to avoid nose-down effect at speeds greater than M = 0.8.

**50.** How can flutter be reduced?

a. Servo tabs.
b. A horn balance.
c. Mass balancing.

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

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

**52.** 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. 1, 4 and 5
b. 2 and 3
c. 3 and 5

**53.** Density varies:

a. inversely with pressure and directly with temperature.
b. directly with pressure and inversely with temperature.
c. directly with temperature and pressure.

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

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

**55.** True airspeed is....

a. equal to dynamic pressure minus static pressure.
b. dependent on the air density.
c. the pressure caused by the forward movement of the aircraft.

**56.** Pressure Error (PE) will cause an altimeter to:

a. either over-read or under-read in level flight.
b. consistently under-read in a climb or descent.
c. only over-read in a climb.

**57.** If an aircraft were to climb after suffering a pitot blockage, the ASI would apparently:

a. show no change at all.
b. under-read, indicating a decrease in speed.
c. over-read, indicating an increase in speed.

**58.** The purpose of the altitude alert system is to generate a visual and aural warning to the pilot when the:

a. proximity to the ground becomes dangerous.
b. airplane altitude differs from a selected altitude.
c. altimeter setting differs from the standard setting above the transition altitude.

**59.** In An Air Data Computer (ADC), aeroplane altitude is calculated from:

a. Measurement of absolute barometric pressure from a static source on the fuselage.
b. The difference between absolute and dynamic pressure at the fuselage.
c. Measurement of elapsed time for a radio signal transmitted to the ground surface and back.

**60.** Position error:

a. will depend solely on the attitude of the aircraft.
b. will usually decrease with an increase in altitude.
c. may be reduced by the fitting of static ports.

**61.** The compensator in a fuel tank measures ....

a. fuel quantity.
b. specific gravity of fuel.
c. capacitance of fuel transmitter.

**62.** The gyro mass is concentrated at its edge to....

a. increase its speed of rotation.
b. relieve bearing wear.
c. increase its rigidity.

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

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

**64.** Deviation compensation in a flux gate compass is done:

a. Mechanically.
b. Electronically.
c. Automatically within the compass system.

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

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

**66.** In a direct reading compass, horizontality is achieved by....

a. changing the magnet system in a liquid-filled bowl.
b. using jeweled bearings.
c. using pendulous suspension.

**67.** The flight data recorder must automatically stop data recording when the....

a. main gear shock strut compresses when touching the runway.
b. the airplane is on the ground and the engines are turned off.
c. airplane clears the runway.

**68.** Airspeed is shown:

a. on both EADIs.
b. only on the pilot in commands EHSI.
c. on both EHSIs.

**69.** 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:

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

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

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

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

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

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

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

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

a. to help the pilots do a minor maintenance task.
b. to detect and report failure.
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. Fault Code.
b. Status Message.
c. Maintenance Message.

**75.** The FMS is updated

a. by an aircraft engineer updating the system either by a floppy disc, a CD or even a hard disk.
b. by the aircrew by reference to the Tech Log.
c. automatically by update from the ACARS.

**76.** Direct tekst entry for airport directory or word searches on the Electronic Library System is done by …

a. the scratch pad on the CDU.
b. a keyboard underneath the active-matrix liquid display.
c. a soft keyboard function, displayed on the liquid display screen.

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

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

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

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

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

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

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

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

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

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

**82.** The first 2 bytes of the IP address for IMA communication are called …

a. Host ID.
b. the Net ID.
c. Sign Status Matrix (SSM).

**83.** Airplane system data critical to flight are connected to the ….. In the Core Network System.

a. Isolated Data Network (IDN)..
b. Open Data Network (ODN).
c. Common Data Network (CDN).

**84.** This is a …. (See the figure)

a. RJ45 connector.
b. RJ12 connector.
c. RJ61 connector.

**85.** The ARINC 664 Ethernet uses …

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

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

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

**87.** Which discretes provides the PSEU (Proximity Switch Electronics Unit) to the IFES SC (In-Flight Entertainment System Controller)?

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.
c. Air/ground discrete; air speed discrete; altitude discrete, GPS position discrete.

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

a. the IDN (Isolated Data Network) of the Core network system.
b. its own network system, completely isolated from the Core network system.
c. the ODN (Open Data Network) of 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 ACR (Avionics Communication Router).
b. the use of the GSM Cell Data Mode (CDM), also referred to as Cell Modem (CM).
c. the ATIS (Automatic Terminal Information Service).

**90.** Which unit lets the crew monitor and control the CSS (Cabin Services System)?

a. The PCU (Passenger Control Unit).
b. The SDU (Smart Display Unit).
c. The CAP (Cabin Attendant Panel).

**91.** Which item provides the aircraft crew access to configuration of the IFES, the capability of storing data, and access to passenger database?

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

**92.** 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?

a. ethernet gateway module.
b. open world diode.
c. secure communication interface.

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

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

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

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

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