Question block created by wizard

This exam contains 96 questions.

1. A single axis autopilot may also be called:

a. wing leveller.
b. altitude hold.
c. auto stabilisation loop.

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

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

3. A three-axis auto pilot is....

a. a system which will maintain a preselected airspeed.
b. a system which will maintain a preselected altitude.
c. an auto stabilisation system.

4. The Altitude Select System:

a. Engages autopilot Auto Trim at selected altitude.
b. Is annunciated by light and/or sound when airplane is approaching selected altitude.
c. Disengages autopilot Auto Trim at selected altitude.

5. During approach, roll out mode occurs....

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

6. In the FMS vertical navigation (V NAV) climb mode the throttles are used for

a. controlling to a maximum thrust.
b. correction minor speed deviations.
c. maintaining a computed EPR.

7. When being engaged, and without selecting a particular mode, an automatic pilot enables....

a. a constant speed on track, wings horizontal.
b. all aeroplane piloting and guidance functions except maintaining radio-navigation course lines.
c. aeroplane stabilisation with attitude hold.

8. An automatic flight control system is fitted with control wheel steering (CWS)

a. the autopilot must be disengaged before the pilot can input manoeuvring commands.
b. the CWS is only there for steering on the ground.
c. manoeuvring commands may be input by applying normal force to the control yoke without first disengaging the autopilot.

9. The purpose of a yaw damper is to

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

10. A yaw damper will apply rudder proportional to

a. rate of yaw.
b. attitude of aircraft.
c. amount of aircraft disturbance.

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. a passive failure with the system reverting to manual operation.
c. 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.

12. A triplex system loses one channel, the pilot....

a. can use auto approach only.
b. can continue with autoland.
c. must make a full manual approach and land.

13. Automatic trim is used to....

a. maintain level flight.
b. allow full authority to be regained by the aileron.
c. prevent loads on the elevator trims.

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. An automatic pitch trim system employs a separate pitch trim servomotor which operates....

a. in parallel with the autopilot pitch control servo.
b. in series with the autopilot pitch control servo.
c. as a stand-alone system.

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

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

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

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

19. The flight director is displayed on the....

a. bearing indicator
b. EADI
c. EHSI

20. Mode "Localizer ARM" active on Flight Director means:

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

21. If during take off (auto throttle engaged) the auto throttle fails, then....

a. Auto pilot disengages.
b. Status light illuminates.
c. Throttle hold is annunciated.

22. 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:

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

23. The order of autoland approach is

a. GS, LOC, ATT HOLD, FLARE
b. LOC, GS, ATT HOLD, FLARE
c. LOC, GS, FLARE, ATT HOLD

24. During a CAT 2 ILS automatic approach, the source for altitude information is the

a. basic altitude capsule stack.
b. radar altimeter which becomes effective below about 2500 feet.
c. mode comparator sensor.

25. In an Autoland, autothrottle is disengaged

a. after a fixed period of the time after landing.
b. after reverse thrust is applied.
c. manually after landing.

26. The ATC altitude information is relative to....

a. 10.92 mbar level.
b. 1013.2 mbar level.
c. 29.92 bar level.

27. 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) pulse - (3) UHF
c. (1) secondary - (2) FM - (3) SHF

28. On a TCAS2 (Traffic Collision Avoidance System) the preventive " resolution advisory" (RA)....

a. advices the pilot to modify the speed of his aircraft.
b. suggests action to be taken to avoid a conflict.
c. advices the pilot to modify effectively the vertical speed of his aircraft.

29. A "resolution advisory" (RA) is represented on the display system of the TCAS 2 (Traffic Collision Avoidance System) by a....

a. solid red square.
b. red full circle.
c. blue or white full lozenge.

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

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

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

a. ground radio aid used to measure the true altitude of the aircraft.
b. self-contained on-board aid used to measure the true height 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. primary radar.
b. weather radar.
c. radio altimeter.

33. ARINC 429 SDI word format is at bits

a. 9 - 10
b. 1 - 8
c. 31 - 32

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

a. Timing the interval between the reception of sequential secondary radar pulses from the MLS station to the aircraft.
b. A DME co-located with the MLS transmitters.
c. Measurement of the frequency shift between the MLS azimuth and elevation transmissions.

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

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

36. Hyperbolic navigation systems determine present position from the intersection of....

a. lines of position.
b. GPS satellite intersection.
c. longitudinal magnetic field lines.

37. What is the difference between VOR and hyperbolic navigation?

a. VOR has straight lines and hyperbolic navigation lines are curved.
b. Hyperbolic has straight radial lines and VOR navigation lines are curved.
c. There is no difference between VOR and Hyperbolic navigation.

38. Due to 'Doppler' effect an apparent decrease in the transmitted frequency, which is proportional to the transmitter's velocity, will occur when the transmitter....

a. moves away from the reciever.
b. moves toward the reciever.
c. and receiver move towards each other.

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

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

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

41. Exit signs must have …

a. red letters on a white electrically or self illuminated background.
b. white electrically or self illuminated letters on a black background.
c. black letters on a white electrically or self illuminated background.

42. The PA amplifier sets the priority for the audio inputs.

Which has the highest priority?

a. Announcement from an attendant.
b. Boarding Music.
c. Announcement from the flight compartment.

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 is communication from the In Flight Entertainment System to a ground station achieved?

a. Aircraft Communications Adressing and Reproting System (ACARS).
b. Selective Calling System (SELCAL).
c. Automatic Terminal Information System (ATIS).

45. How can adverse yaw when rolling about the longitudinal axis may be prevented ?

a. Equal deflection lateral control surfaces.
b. Differential ailerons.
c. A smaller fin.

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

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

47. What will an extended fowler flap increase?

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

48. 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.

49. What eliminates Dutch roll ?

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

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

When the aircraft....

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

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

52. 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.

53. 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.

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

54. The pressure probe used to measure the pressure of a low pressure fuel pump is:

a. a bellows sensor.
b. a Bourdon tube.
c. a capacitor.

55. A partially blocked air filter will cause the air-driven turn indicator to:

a. over read the correct rate of turn.
b. under read the correct rate of turn.
c. indicate zero rate of turn.

56. If the static source to an altimeter becomes blocked during a descent, the instrument:

a. Will progressively under-read.
b. Continues to show the height at which the blockage occurred.
c. Will over-read by a constant amount.

57. Compressibility error of the ASI is normally corrected by:

a. The calibration of the instrument.
b. The use of the navigation computer by the pilot.
c. Error is insignificant and can be ignored.

58. 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:

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

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

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

60. A static port is used to measure:

a. dynamic pressure minus pitot pressure.
b. dynamic pressure plus pitot pressure.
c. atmospheric pressure.

61. 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:"

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

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

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

63. When turning right onto the runway prior to take-off, the ball on the turn and bank indicator will:

a. move to the left.
b. stay central in the turn.
c. move to the right.

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

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

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

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

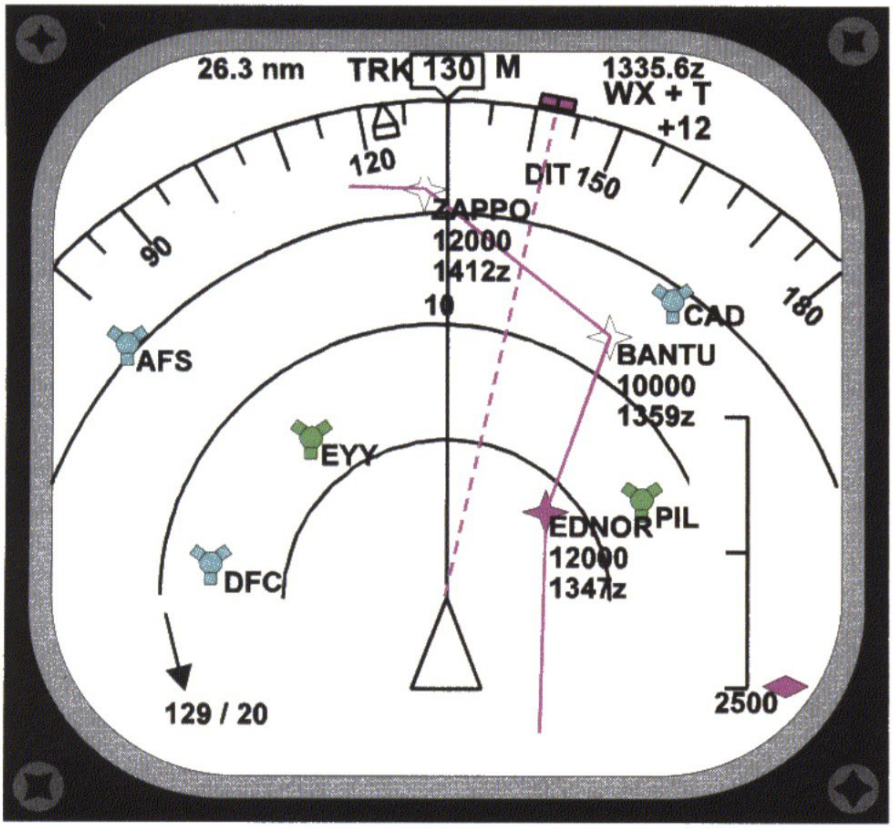
66. At a given place, compass deviation will:

a. Be constant always.
b. Vary with aircraft heading.
c. Depend on the value of variation.

67. The flight data recorders must preserve the required data of the last:

a. 30 minutes of operation.
b. 25 hours of operation.
c. 48 hours of operation.

68. Identify the correct statement (See the figure)



a. The aircraft's track is 165°M.
b. The aircraft is closing the localiser from the right, heading 130°M and is approaching the glide path from above.
c. When established on the localiser the inbound heading will be 165°M.

69. Alarms are standardized and follow a code of colors. Those requiring action but not immediately, are signaled by the color:

a. flashing red.
b. red.
c. amber.

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

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

71. In an engine vibration monitoring system for a turbojet any vibration produced by the engine is:

a. amplified and filtered before being fed to the cockpit indicator.
b. inversely proportional to engine speed.
c. fed directly to the cockpit indicator without amplification or filtering.

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

a. a navigating control aid.
b. a synthetic view of the instrument procedure.
c. a monitoring only during Cat III precision approaches.

73. Access to the Central Maintenance Computers is through ….

a. the line select keys on the CDU.
b. a control box.
c. a press-to-test switch on the computer itself.

74. 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.

75. The FMS is updated

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

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

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

77. Defects of the printer are notified …

a. by a fault report to the CMC (Central Maintenance Computer).
b. by a fault report to the CDU (Control Display Unit).
c. by way of lamps on the front of the panel itself.

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

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

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

a. the "Damage Tolerance Monitoring".
b. the "HUMS" (Health and Usage Monitoring System).
c. the "Low Cycle Fatigue Counter".

80. How are drinking water pipes are prevented from freezing?

a. Installation of neoprene foam insulation.
b. Placing the pipes adjacent to hot water piping.
c. Wrapping the pipes with heated tapes or blankets.

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

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

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

84. "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 ….

a. AFDX (Avionics Full Duplex Switched Ethernet).

b. Controller Pilot Data Link communications (CPDLC).
c. Automatic Dependent Surveillance Broadcast (ADS-B).

85. 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.

86. What is the primary control interface between the IFES (In Flight Entertainment System) and cabin and maintenance crews?

a. The IFES AMCU (Advanced Master Control Unit).
b. The IFES SC (system controller).
c. The IFES CP (Crew Panel).

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

How are the first two fields called?

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

88. The inflight entertainment equipment is connected to …

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

89. Data from the In-Flight Entertainment system can be transferred to a terminal station on the ground

a. through a wireless GSM Cell Data Modem when the aircraft is at the terminal.
b. through an ethernet link when the aircraft is on the ground.
c. through an ethernet link when the aircraft is at the terminal.

90. Which unit gathers information fro proximity sensorsto determine the flight phase and sends discretes to the System Controller to provide it with flight phase information for the passengers?

a. The INS (Inertial Navigation System) or IRS (Inertial Reference system).
b. The PSEU (Proximity Switch Electronics Unit).
c. The FMS (Flight Management System).

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

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

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

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

93. Data on the USB keys (for data loading) is stored under the …

a. ARINC 629 format.
b. ARINC 429 format.
c. ARINC 615A format.

94. A pre-departure clearance or PDC is given to the pilots via ….

a. an ACARS message.
b. voice (from ATC).
c. the datalink system.

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

a. central maintenance computing function.
b. crew information system.
c. common data network (CDN).

96. A passenger with a laptop can access to e-mail and internet applications in the...

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