Question block created by wizard

This exam contains 96 questions.

1. A single axis autopilot may also be called:

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

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

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

3. 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.

4. What controls in a closed loop system the flight control movement?

a. A servomechanism.
b. An amplifier.
c. A rate gyro.

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

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

6. What is the controlling factor in the automatic flare mode?

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

7. The GA mode is usually initiated by....

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

8. Which modes are incompatible?

a. VOR + ALTITUDE HOLD
b. HDG + V/S HOLD
c. G/S + ALTITUDE HOLD

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

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

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 Stability Augmentation System (SAS) is a rate damping system that will:

a. All of the answers.
b. Gives good control and handling characteristics.
c. Stop unwanted rate of motion from developing.

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

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

13. Automatic mach trim is functional in the....

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

14. Automatic trim is used to....

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

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

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

16. The flare manoeuvre may be controlled by signals from

a. radio altimeter.
b. the glide slope receiver.
c. the localiser receiver.

17. LNAV is an …(1)…… input to the ……(2)…… channel using data from the …(3)……..

a. (1) outer loop - (2) pitch - (3) FMC
b. (1) inner loop - (2) pitch - (3) ADC
c. (1) outer loop - (2) roll - (3) FMC

18. The fixed trim tab....

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

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

a. bearing indicator
b. EADI
c. EHSI

20. The take-off of an aircraft is....

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

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

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

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

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

24. When an automatic landing is interrupted by a go-around:
1. The auto throttle reacts immediately upon the pilot action on TO/GA switch in order to recover the maximum thrust.
2. The autopilot monitors the climb and rotation of the airplane.
3. The autopilot retracts the landing gear and reduces the flap deflection in order to reduce the drag.
4. The pilot performs the climb and the rotation of the airplane.
5. The pilot retracts the landing gear and reduces the flap deflection in order to reduce the drag.

The combination regrouping all the correct statements is:

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

25. A landing will be considered to be performed in the AUTOMATIC mode when:
1. the autopilot maintains the airplane on the ILS beam until the decision height is reached then is disengaged automatically.
2. the auto throttle maintains a constant speed until the decision height is reached then is disengaged automatically.
3. the autopilot maintains the airplane on the ILS beam until the flare.
4. the auto throttle decreases the thrust when the height is approximately 30 ft.
5. the flare and the ground roll are performed automatically.

The combination regrouping all the correct statements is:

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

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

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

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. The principle of the TCAS (Traffic Collision Avoidance Systems) is based on the use of :

a. air traffic control radar systems.
b. transponders fitted in the aircraft.
c. airborne weather radar system.

29. The TCAS 2 (Traffic Collision Avoidance System) provides :

1. traffic information (TA: Traffic Advisory)
2. horizontal resolution (RA: Resolution Advisory)
3. vertical resolution (RA: Resolution Advisory)
4. ground proximity warning

The combination regrouping all the correct statements is:

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

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

32. The data supplied by a radio altimeter:

a. is used only by the radio altimeter indicator.
b. indicates the distance between the ground and the aircraft.
c. is used by the automatic pilot in the altitude hold mode.

33. ARINC 429 SDI word format is at bits

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

34. Which one of the following is an advantage of a Microwave Landing System (MLS) compared with an Instrument Landing System (ILS)?

a. The installation does not require to have a separate method (marker beacons or DME) to determine range.
b. There is no restriction on the number of ground installations that can be operated because there is an unlimited number of frequency channels available.
c. It is insensitive to geographical site and can be installed at sites where it is not possible to use an ILS.

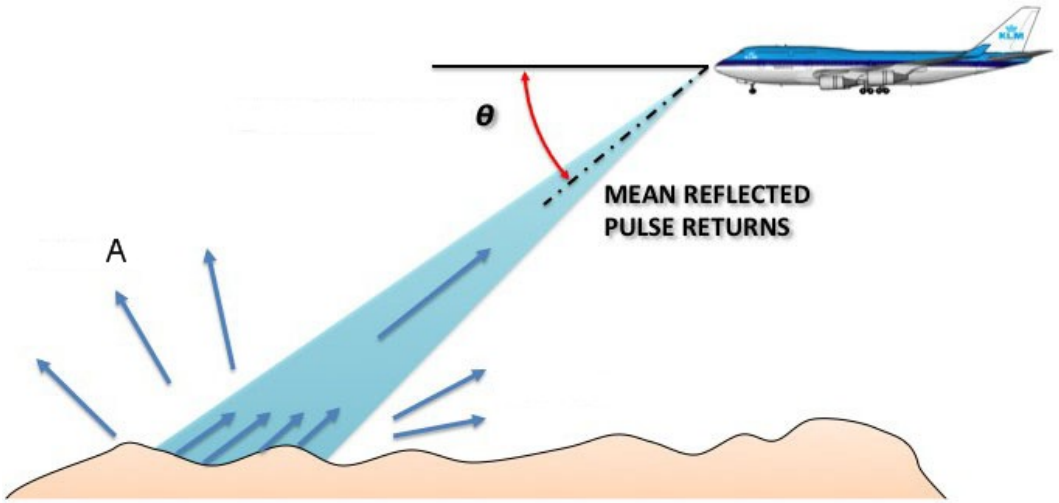
35. MLS installations notified for operation, unless otherwise stated, provide azimuth coverage of....

a. +or - 20° about the nominal courseline out to a range of 20 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 30 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) 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. pulse shift transmission.
b. radar principles using frequency shift.
c. radio waves refraction in the ionosphere.

40. Emergency lightning can be illuminated by....

a. a guarded three position switch (ON-OFF-ARMED) in the cabine and a Two position switch in the cockpit (ON-NORMAL).
b. a guarded three position switch (ON-OFF-ARMED) in the cockpit and a Two position switch in the cabin (ON-NORMAL).
c. automatically when power is removed from the aircraft (in an emergency or by the pilots).

41. 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.

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

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

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

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

a. the right aileron moves up and the left down.
b. the right aileron moves down and the left up.
c. the right elevator goes 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 purpose of a trim tab is to reduce continuous stick force to zero, a servo tab only reduces stickforce.
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.
b. Wing area and aspect ratio.
c. Wing area and camber.

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

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 will limit the flight profile.
c. It has no effect on the aircraft's operation.

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. The velocity of sound at the sea level in a standard atmosphere is:

a. 661 kts.
b. 332 kts.
c. 644 kts.

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

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

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

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

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. IAS is adjusted to CAS by the application of:

a. density error.
b. compressibility error.
c. instrument and pressure error.

58. Altitude alert is when....

a. an alert of the ground proximity is made.
b. a decision of whether to land is made.
c. an alert of the selected altitude of the aircraft is reached.

59. What are the inputs to the ADC ?
1. OAT.
2. Dynamic pressure.
3. TAT.
4. Static pressure.
5. Vertical speed.
6. Pitot pressure.

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

60. While carrying out a leak check of the altimeter, if the static is leaking, the VSI would:

a. not be affected.
b. indicate climb.
c. indicate decent.

61. Direct reading aircraft thermometer usually consists of a bimetallic element protruding into the airstream. Movement of the pointer over the temperature scale will depend on:

a. increase in pressure as airspeed increases.
b. different coefficients of expansion of the two metals.
c. difference in electrical resistance of the two metals.

62. A force applied to the spinning axis of a gyro is precessed:

a. through an angle equivalent to 15.04° x sin λ (latitude).
b. through 90° in the direction of rotor spin.
c. through 90° in the direction of the force.

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

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

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

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

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.

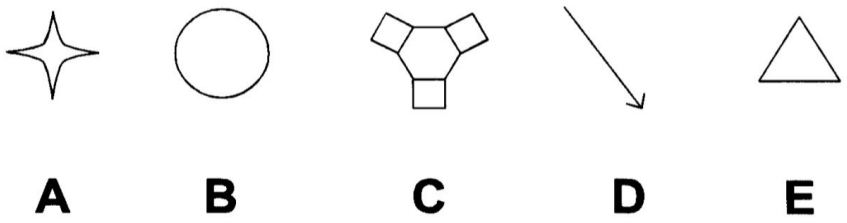
66. When accelerating on an easterly heading in the northern hemisphere, the magnet system of a direct reading compass will:

a. Turn anti-clockwise. indicating an apparent turn towards North.
b. Turn clockwise, indicating an apparent turn towards North.
c. Turn anti-clockwise, indicating an apparent turn towards South.

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

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

68. The symbols A, C and E are best described respectively as: (See the figure)



a. (A) off route waypoint - (C) navigation aid - (E) a navigation point making up selected route.
b. (A) next waypoint - (C) navigation aid - (E) airport.
c. (A) active waypoint aircraft currently navigating to - (C) navigation aid - (E) off route waypoint.

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

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

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

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

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

75. Data loading is a ....

a. reading or writing information facility.
b. reading information facility.
c. writing information facility.

76. Information updates to the airborne system and communications between the groundbased and airborne systems are accomplished …

a. by an aircraft engineer updating the system either by a floppy disc, a CD or even a hard disk.
b. through the Gate-link concept.
c. automatically by update from the ECAM.

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. Helicopter rotor track and balance is done by

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

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

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

80. Waste water drain mast....

a. are not heated.
b. are heated to a lower temperature with the aircraft on ground.
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 429, ARINC 653 or AFDX.
b. ARINC 653 for the software avionics and AFDX for the data network bus.
c. ARINC 429 or AFDX (Avionics Full DupleX).

82. For IMA, a faster and duplex data communication protocol was required than the ARINC 429 standard. The new standard is ..

a. ARINC 664.
b. AFDX (Avionics Full DupleX).
c. ARINC 429 duplex.

83. Which network system routes data between the airplane and ground networks and stores airline data and applications?

a. IDN.
b. ATIS.
c. IMA (core network).

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. "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. Controller Pilot Data Link communications (CPDLC).
b. AFDX (Avionics Full Duplex Switched Ethernet).
c. Automatic Dependent Surveillance Broadcast (ADS-B).

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

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

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.

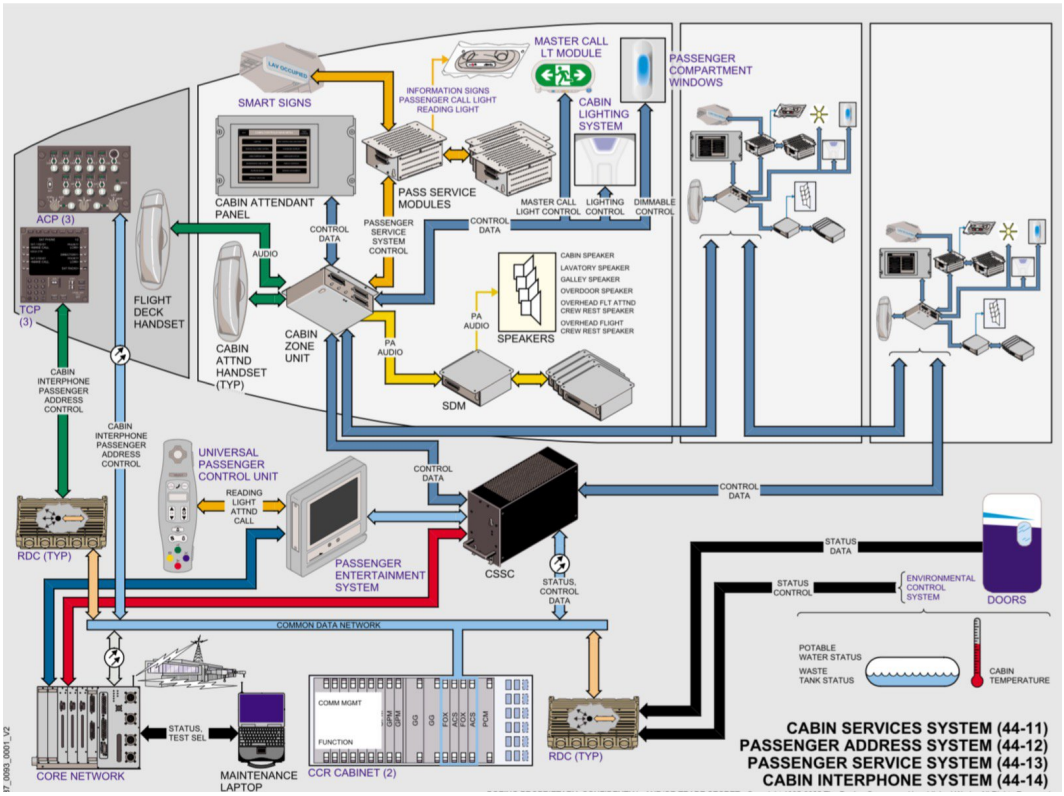
88. The inflight entertainment equipment is connected to …

a. its own network system, completely isolated from the Core network system.
b. the IDN (Isolated Data Network) of 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 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 information signs are controlled from the cabin configuration software inside the …. (See the figure)



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

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 File Server.
c. the IFES Advanced Master Control Unit (AMCU).

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

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

a. Flight Operations Domain.
b. Avionics Domain.
c. Communication & Cabin 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. on the maintenance laptop and the electronic flight bags.
c. only on the maintenance laptop.

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

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