Question block created by wizard

This exam contains 140 questions.

1. The variable incidence stabilizer provides....

a. Roll Control.
b. short term pitch change.
c. long term pitch change.

2. Where are elevons installed?

a. To each side of the aircraft on the leading edge of the wing.
b. To one side of the aircraft on the trailing edge of the wing.
c. To each side of the aircraft on the trailing edge of the wing.

3. What type of aerodynamic balance system is shown in the figure below?

a. Horn Balance
b. Inset Hinges
c. Aerodynamic balance panel

4. How does the air act at low-speed aerodynamics?

a. as a fluid.
b. as a gas.
c. as a solid.

5. What is the effect on a supersonic airstream passing through a normal shock wave?

a. It increases in speed.
b. It slows down to subsonic speed.
c. Its speed is reduced to ZERO.

6. On a subsonic jet engine, what type of intake will be used?

a. Divergent duct-intake.
b. Pilot intake.
c. Three-shock intake.

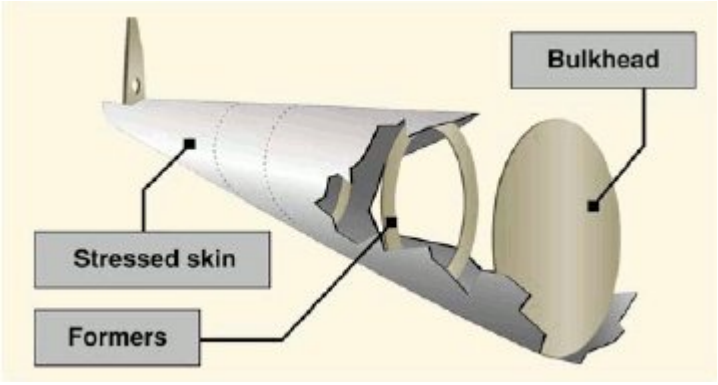
7. What regulation is applicable for construction of large aircraft?

a. All new designed large aircrafts must comply to the EASA certification specification CS-25.
b. The manufacturing of an aircraft is regulated under the EASA Part-145.
c. Each manufacturing country applies his own regulation. This is accepted all over the world by the Chicago convention of 1964.

8. What is the main reason of having drains in the aircraft structure?

a. Collecting fluids without draining could cause fire, corrosion or causing short cuts in the electrical system.
b. The humidity caused by the fluid can influence the air-conditioning system.
c. To avoid the extra weight. This can overload the structure.

9. What type of construction is shown in the figure below?



a. Cantilever construction.
b. Monocoque
c. Semi-monocoque

10. A bonded metal-to-metal joint will be:

a. Weaker than a riveted joint.
b. Just as strong as a riveted joint.
c. Stronger than a riveted joint.

11. What is the most common used surface protection for aluminium alloy?

a. Cladding
b. Paint
c. Electroplating

12. What is commonly used to level an commercial aircraft?

a. A clinometer.
b. A surveyors tape measure.
c. A plump bob and spirit level.

13. Which of the following compartments is usually unpressurized?

a. Cargo compartment.
b. Avionics compartment.
c. Rear fuselage area.

14. When an aircraft is transporting dangerous goods ....

a. there is no need for special precautions.
b. there will be separated goods in special containers.
c. there will be special flight conditions.

15. What is the most critical part of a wing as far as the production of lift is concerned?

a. Top and bottom side of the wing.
b. Trailing edge and bottom side of the wing.
c. Front end or leading edge.

16. Access into an integral fuel tank by:

a. There is no access into integral tanks they are sealed units and are removed as a whole.
b. Manhole covers on the upper wing surface.
c. Manhole covers on the lower wing surface.

17. Radio antenna and HF equipment can typically be found on or in

a. Vertical stabilizer.
b. Avionics bay.
c. Horizontal stabilizer.

18. How is the vertical stabilizer attached to the fuselage?

a. Bonded
b. Bolted
c. Riveted

19. Elevator range of movement is:

a. Smaller in the up-movement.
b. The same up and down.
c. Larger in the up movement.

20. What type of aircraft does not need mass balancing?

a. Aircraft operated with control cables.
b. Aircraft equiped with aerodynamic balance tabs.
c. Aircraft controlled with fly-by-wire.

21. Titanium and steel are used in which areas of the nacelle?

a. Fan cowl doors.
b. Combustion chamber and exhaust.
c. The intake and exhaust.

22. The purpose of a fire seal is to prevent....

a. fire reaching the components contained inside the firewalls.
b. hot air from the engine core circulating in the fan case area.
c. fire reaching the passenger cabin.

23. Where is the ground air conditioning cart used for?

a. Running the de-icing system.
b. Starting the engines.
c. Supplying the cabin with conditioned air, when only the cabin needs to be conditioned.

24. Which of the following statements is **incorrect**?

A turbo compressor....

a. is used as a supplemental use source of bleed air.
b. can be switched on and off by the crew.
c. is used on turbo-prop and piston engine.

25. Before the air from the air conditioning pack enters the cabin:

a. Cold air is added to it to obtain the desired cabin temperature.
b. Water is added to it to cool the air down.
c. Hot air is added to it to obtain the desired cabin temperature.

26. To compensate for the discomfort caused by the extraction of water from the air, what is sometimes used on long-haul aircraft?

a. Water separation
b. Water injection
c. Humidifiers

27. Which of the following statements is correct?

a. A vapour cycle machine can be used for pressurization.
b. A vapour cycle machine is used if there is not enough bleed air available.
c. A vapour cycle machine cannot be used on piston engine aircraft.

28. In a double heat exchanger system, which heat exchanger receives cooling first?

a. The secondary main heat exchanger.
b. The primary heat exchanger.
c. They both receive cooling at the same time.

29. In an air-conditioning pack is an anti-ice valve installed. How does it work?

a. Hot air from the anti-ice valve will close as protection the pack flow valve.
b. Hot air will bypass the air cycle machine (ACM) and so the turbine will slow down in rpm.
c. When icing occurs in the water separator, hot air will bypass the air cycle machine (ACM) and will be used to heat up the water separator.

30. What happens if an air conditioning pack overheats?

a. It goes into full cold mode.
b. It automatically shuts down.
c. I automatically slows down.

31. Which of the following modes of pressurization places the highest load demands on the aircraft structure?

a. Unpressurized.
b. Isobaric mode.
c. Constant-differential pressure.

32. What are the basic flight deck indications for pressurization?

a. Cabin altitude, ambient temperature and pressure differential.
b. Aircraft altitude, rate of climb and atmospheric pressure.
c. Cabin altitude, cabin rate of climb and pressure differential.

33. When operating the outflow valve in manual/emergency mode, which motor is used?

a. Both AC and DC motors.
b. The AC motor.
c. The DC motor.

34. A ventilation fan has shut-down due to an overheat condition.

The crew can....

a. restart the fan after it has cooled down.
b. restart the fan immediately by resetting the control switch to 'off' and 'on' again.
c. not restart the fan in flight. Ground crew must reset the system first.

35. What protects the aircraft from over-pressurization?

a. Cabin pressure controller.
b. The positive pressure relief valve.
c. The outflow valve.

36. Which of the following instruments needs pitot pressure to operate?

a. Airspeed indicator.
b. Altimeter
c. Horizontal situation indicator.

37. On which display can I find the glide slope and localizer indication?

a. The horizontal situation indicator.

b. The attitude director indicator.
c. The I.L.S. indicator.

38. A flux valve is used for which type of instrument?

a. A remote reading compass.
b. An altitude director indicator.
c. A direct reading magnetic compass.

39. When does the stick shaker activate?

a. Prior to the stall occuring.
b. When a stall occurs.
c. After stall occurs.

40. The partial compass format of an EHSI shows:

a. A 180 degree arc of a compass rose.
b. A full compass rose.
c. A 90 degree arc of a compass rose.

41. On a multispool turbofan engine, which speed is always displayed?

a. High pressure rotor speed.
b. Fan speed.
c. Gearbox speed.

42. In a Fail Passive System;

a. The crew is part of the monitoring when only one sensor of one kind is available.
b. The crew will disconnect a system before a dangerous situation occurs.
c. The system monitor will disconnect a system before a dangerous situation occurs.

43. The Flight Director provides....

a. thrust commands for the engine trims.
b. computed steering commands to the command bars of the ADI and/or to an autopilot system.
c. data for the air data computers.

44. The Cockpit Voice Recorder....

a. contains also all engine and systems parameters.
b. records all voice information of the cabin crew and the passengers.
c. allows a minimum of 30 minutes of recording.

45. The device that starts emitting its location in the event of a crash is called:

a. a Selcal
b. a GPWS
c. an ELT

46. The three critical measurements for the air data computer are:

a. Airspeed, Altitude and temperature.
b. Altitude, groundspeed and coordinates.
c. Airspeed, radio altitude and temperature.

47. The DME Distance Measurement gives information about:

a. the ground distance from the aircraft to the selected ground station.
b. the attitude of the aircraft.
c. the slant range to the selected ground station.

48. Which type of battery can experience cell reversal and how can it be prevented?

a. NiCad battery. Prevented by never fully discharging the battery.
b. NiCad battery. Prevented by always fully discharging the battery.
c. Lead-acid battery. Prevented by fast charging battery.

49. The electrolyte in a NiCd battery is?

a. Alkaline based.
b. Acid based.
c. Lithium based.

50. How do you call the component that completes the magnetic circuit between the poles in a DC generator?

a. The armature.
b. The brushes.
c. The yoke.

51. What is the dis-advantage of series wound generators?

a. When the aircraft electrical load increases, the output voltage remains the same.
b. When the aircraft electrical load increases, the output current increases.
c. When the aircraft electrical load increases, the output voltage increases.

52. If the over-speed protection circuit in a CSD (Constant Speed Drive) has activated, reset is....

a. only possible in the workshop.
b. possible from the flight deck.
c. possible during Line Maintenance.

53. What type of generator / alternator is used in a variable speed constant frequency system?

a. Brushless alternator.
b. DC generator.
c. DC alternator.

54. When will the hydraulic motor generator (HMG) supply power?

a. Automatically when both main AC buses lose power.
b. Automatically when the main battery is discharged.
c. Manually, when the pilot switches it on after both main AC buses lose power.

55. Which of the following statements about the ram air turbine is false?

a. The RAT can sometimes also supply hydraulic power.
b. The RAT can deploy automatically on the ground.
c. The RAT can be deployed manually.

56. Which of the following is NOT part of a three-unit voltage regulator?

a. Open phase protection.
b. Reverse current relay.
c. Current limiter.

57. Emergency lighting is part of which service?

a. Vital.
b. Essential.
c. Ground.

58. Transformer rectifiers are used for:

a. Converting AC into DC.
b. Converting DC into AC.
c. Boosting the output voltage from 28V to 110V.

59. What is the primary function of a current transformer in an aircraft?

a. Measure voltage in an electrical circuit.
b. Step-up the current in a circuit.
c. Measure current in an electrical circuit.

60. Where in the circuit would a fuse be installed?

a. As close to the unit to be protected as much as possible.
b. As close to the power source as possible.
c. Where access to replace the fuse is easiest.

61. What is 'no breaks power transfer'?

a. Power supply is transferred from one source to another while bypassing the circuit breakers.
b. Power supply remains with the same source even though power transfer to another source has been selected.
c. Power supply is transferred from one source to another without interrupting the supply.

62. What caution action should we take when a seat cover is very dirty?

a. Remove and replace the seat cover for dry cleaning.
b. Remove and replace the seat cover for dry cleaning. Note the number of times this cover has been cleaned because the fire resistance will degrade.
c. Remove and replace the seat cover. Discard the old cover. Use always plastic gloves and a mouth mask for bacterial protection.

63. When does an aircraft needs to be equipped with slides, which can also be used as rafts?

a. All aircraft certified for more than 44 passengers need exits equipped with slides.
b. When the aircrafts flies longer than 90 minutes over water.
c. All exits with a door sill above 1,8 meter have to be equipped with slides.

64. May a demonstration life vest be used in a real emergency?

a. No, the cylinder is empty.
b. Yes, it is the personal life vest of the flight attendant and should be inspected after each demonstration by the flight attendant.
c. Yes, but only if the life time is not expired.

65. In case of electrical power loss, can the pilot still adjust his seat?

a. No, without power the electrical functions, vertical and horizontal movement will be lost. Other functions such as recline and lumber support will remain since they have only manual control.
b. Yes, all the seat functions can always be operated manually.
c. No. The seat is completely blocked in his its last position.

66. Has the observers seat the same functions as the pilot seat?

a. No, on large aircrafts the observer seat is usually very comfortable, but has not as many adjustment possibilities as the pilot seats.
b. Only on large aircraft (B777-B747-A330-A380) where the cockpit surface permits, an identical seat will be installed with all the same adjustments features.
c. Yes

67. How are galleys installed in the cabin?

a. They are usually fixed to the floor track with additional rods attached on side and top structural frames.
b. They are fixed to the floor panels and sealed with silicon's.
c. Since they are made from composite panels they are fixed to the floor tracks.

68. What is the advantage of an integrated air stair?

a. You are independent of ground equipment, but the door can no longer be used as an emergency exit.
b. You are independent of ground equipment.
c. You are independent of ground equipment, there are no major disadvantages since the stair is build that way that it makes a part of the structural strength of the aircraft.

69. A carbon monoxide detector has to be replaced .....

a. monthly.
b. normally every 90 days.
c. daily.

70. What is the sniffer used for?

a. To detect smoke on the flight deck.
b. To detect fire in the avionics compartment.
c. To detect smoke in avionics compartment.

71. In a continuous loop fire detection system is the Kidde system a ....

a. bi-metallic spot type.
b. thermistor type.
c. pneumatic type.

72. Which Halon type doesn't use a pressurisation agent?

a. Halon 1001.
b. Halon 1211.
c. Halon 1301.

73. Some aircraft are fitted with 2 types of fire bottles: dump and metered bottles, used in the cargo compartment. Why is this?

a. To extinguishing different types of fires.
b. To ensure there is enough extinguishing agent for the whole aircraft.
c. To ensure the concentration of extinguishing agent remains high enough for 180 minutes.

74. What does the red indicator disk on the fuselage indicate?

a. Indicates that the fire bottle has not thermally discharged.
b. Indicates a thermal discharged of the fire bottle.
c. Indicates that the fire bottle has been fired.

75. Pushing the fire test button does not test:

a. Fire detectors.
b. Indications and warnings.
c. Squibs.

76. When should you use water-type portable fire extinguishers?

a. Water-type portable extinguishers are perfect solid combustible materials even metal fires. (ex: brakes and magnesium wheels). Do not use them on flammable liquid fires.
b. Water-type portable extinguishers are best for solid combustible fires (paper, fabrics, wood etc.). Never use them on electrical or flammable liquid fire.
c. Water-type portable extinguishers can be used for every fire.

77. Ground spoilers are used for ....

a. attitude control.
b. slowing down the aircraft on ground
c. slowing down the aircraft in flight.

78. Which of the following control systems for the horizontal stabilizer trim has the highest priority?

a. Mach/speed trim
b. Manual trim
c. Autopilot trim

79. What is gust suppression?

a. It makes the quality of the passenger ride better in the aft portion of the fuselage.
b. It moves the elevator in the opposite direction of movement.
c. A locking mechanism on the ground spoilers.

80. What are slat track doors?

a. They can be opened to gain access to the slat tracks for maintenance.
b. They close the gap in the wing when the slats are retracted.
c. They close the gap in the wing leading edge when the slats are extended.

81. What happens when the pilot initiates a left turn, with spoiler augmentation?

a. The RH aileron operate down and the spoilers on the right wing raise further up..
b. The LH aileron operate up and the spoilers on the left wing raise further up.
c. Only the ailerons are used to roll the aircraft.

82. In a manual operated control system the control surfaces are moved by ....

a. cables and pushrods.
b. only pushrods.
c. only cables.

83. Which flight control is used to compensate for dutch roll.

a. Ailerons.
b. Rudder.
c. Elevators.

84. What type of aerodynamic balancing is used in the rudder?

a. Horn Balance
b. Trim Tab
c. Inset Hinges

85. Which of the following DO NOT actively prevent the aircraft from stalling?

a. Auto slats.
b. Stick pusher.
c. Stick shaker.

86. Why does water in the fuel pose a danger?

a. The water could freeze inside the fuel tanks and block the fuel pumps.
b. The water could freeze in the fuel filter and block the fuel flow to the engine.
c. The water could enter the engine fuel control unit and damage it.

87. What is the procedure called where the fuel tank is made leak free during construction?

a. A seal procedure.
b. A leak prevention plan.
c. A seal plan.

88. Which statement is true regarding jet pumps?

a. Jet pumps are used to pump fuel to the jet engines.
b. Jet pumps are electrical pumps.
c. Jet pumps use fuel pressure from the booster pumps to operate.

89. What is probable cause for a fuel tank overpressure protection to be activated?

a. The aircraft has been defueled by suction defueling.
b. The NACA vent scoop is blocked.
c. The fuel tanks have been overfilled.

90. Engines receive fuel from, which fuel tank?

a. Always the centre wing fuel tank
b. It's own main tank
c. Collector

91. What does a fuel density of 1.0 indicate?

a. There is no water in the fuel.
b. The wrong type of fuel is in the tanks.
c. There is water in the fuel.

92. If there is an overfill condition in the refueling system and sensors are not working, the fuel will spill out ...

a. into the surge tank.
b. onto the ground.
c. in a special overspill fuel tank.

93. What is the purpose of longitudinal balance fuel systems?

a. Carry more fuel.
b. Trim the aircraft so that there is no need for trimable horizontal stabilizers.
c. Keep the centre of gravity as close as possible to the ideal position.

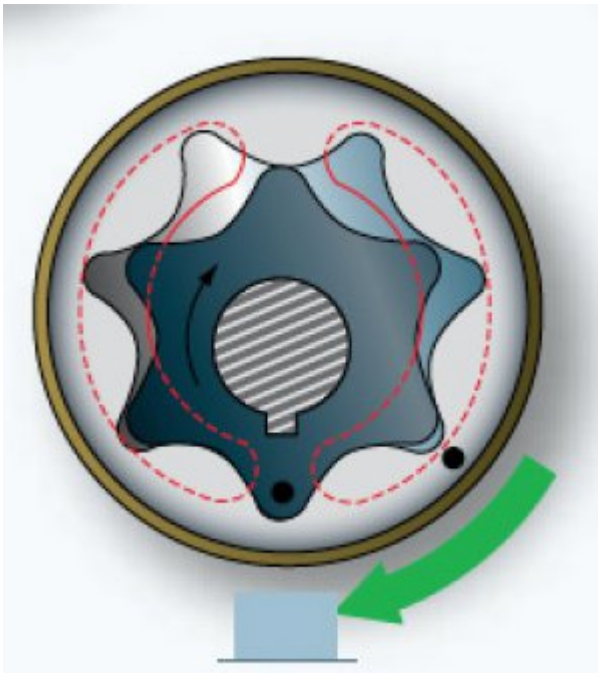
94. Which fluid goes through the hydraulic heat exchangers inside the main fuel tanks?

a. Pump case drain fluid.
b. Pump return fluid.
c. Pump supply fluid.

95. What can prevent foaming of the hydraulic fluid in a reservoir at an altitude higher than 20.000 feet?

a. A integral reservoir.
b. A reservoir with a piston to separate the air from the oil.
c. Pressurize the reservoir.

96. What type of pump is shown in the figure below?



a. Hand pump
b. Ge-rotor pump
c. Gear pump

97. What prevents nuisance blockage warnings of a filter at cold temperatures?

a. A thermal lockout on the blockage indicator.
b. A thermal bypass valve on the filter.
c. A manual reset switch on the flight deck.

98. What is the safety device called that cuts off the hydraulic flow after a certain amount of fluid has passed through it?

a. A throttling valve.
b. A check valve.
c. Hydraulic fuse.

99. Which component in a hydraulic system cannot be tested with a hydraulic cart (or Mule) ?

a. Pressure sensors.
b. Landing gear.
c. Pumps.

100. Which type of ice poses the biggest threat to the safety of an aircraft?

a. Gleam Ice
b. Clear Ice
c. Dry Ice

101. What type of valve is the engine anti-ice valve?

a. Pressure regulation valve.
b. Shut-off valve.
c. Pressure regulating and shut off valve.

102. Which system is used only for de-icing an air-intake of a turbo propeller aircraft?

a. Electrical.
b. Hot bleed air.
c. Pneumatic or mechanical.

103. Rain repellant is stored in:

a. A disposable canister.
b. An unpressurised canister.
c. A rechargeable pressurised tank.

104. Air data probes are ....

a. electrical heated.
b. de-iced with pneumatic air.
c. anti-iced with bleed air.

105. What is the purpose of the parallel motion device on a wiper system?

a. Ensures the blade maintains contact with the screen.
b. Ensures the blade remains parallel with the screen.
c. Ensures the blade moves in normal arc.

106. What is the function of the oil in a gas/oil shock absorber?

a. Lubricates the piston.
b. Absorbs heat.
c. Controls the recoil.

107. How is a landing gear mechanical locked down?

a. By a down-lock actuator.
b. by lock pins.
c. By over-centring links.

108. Which indications are shown when the landing gear is up and locked?

a. Nothing.
b. Three red lights.
c. Three green lights.

109. What is the most common type of wheel bearing used?

a. Bail bearings.
b. Conical roller bearings.
c. Needle bearings.

110. Where would you find a chined tyre?

a. On the nose gear tyre.
b. On large military jets main wheels.
c. On the tail gear tyre.

111. What is the purpose of body gear steering?

a. To be able to turn more sharply.
b. To be able to steer the aircraft if the nose gear steering fails.
c. To reduce the wear on the tyres in sharp turns.

112. A proximity sensor which is in 'target far' condition is said to be the equivalent of:

a. A failed switch.
b. An open switch.
c. A closed switch.

113. Where will you find taxi lights?

a. In the wing root.
b. In the wing leading edges.
c. On the nose landing gear.

114. Which lights are located in the passenger service units?

a. Spotlights.
b. Flood lights.
c. Cabin emergency lights.

115. To ensure correct operation of the emergency lighting system, what must be done at specific maintenance intervals?

a. Recharge the battery packs.
b. Replace the battery pack.
c. Replace all emergency light bulbs.

116. What are the reasons for automatic deployment of emergency oxygen?

1. Cabin depressurization.
2. Smoke in the cabin.
3. Insufficient cabin air in-flow.

a. 1 + 3
b. 1 + 2
c. 1 + 2 + 3

117. How does an "on board oxygen generation system" (OBOGS) produce oxygen?

a. By using sodium chloride.
b. By using molecular filters.
c. By electrolysis of water.

118. When the N/100% selector is placed in the 'N' position on a diluter demand regulator, what is the oxygen flow supplied?

a. A mixture of oxygen and cabin air while the user is inhaling.
b. 100% oxygen while he user is inhaling.
c. A mixture of oxygen and cabin air at a constant flow.

119. A green disk on the side of the fuselage is missing, what does this indicate?

a. The maximum pressure in the oxygen cylinder has been exceeded.
b. The maximum pressure in the oxygen supply lines has been exceeded.
c. The oxygen bottle pressure is below operational limits.

120. What type of pneumatic system would have a water separator installed?

a. Engine bleed air system.
b. Low pressure system.
c. High pressure system.

121. The bleed air from the APU can be used:

a. Up to 18.000ft
b. At all altitudes.
c. Up to 18.000m

122. On a twin spool auxiliary power unit, what is controlled by the VGV's?

a. A load compressor.
b. A pressure regulating valve.
c. The speed of the turbine and also of the compressor.

123. In which way does the pneumatic system interface with the fire protection system?

a. A fire in the bleed supply system activates the fire extinguishing system.
b. Pulling the fire handle of one engine turns off its bleed supply.
c. Pulling the fire handle on one engine turns off the complete bleed air system.

124. Greywater from the sinks and galleys will be....

a. collected in a waste tank.
b. dumped overboard.
c. recycled and used to flush the toilets.

125. What happens if the safety plug (doughnut) is not fitted to the drain pipe?

a. The drain cap cannot be closed.
b. The waste tank will leak.
c. A warning light will illuminate on the flight deck.

126. Which type of messages are relevant to the aircraft minimum equipment list (MEL)?

a. Maintenance Memo
b. Status messages
c. Fault codes.

127. Besides data for the central maintenance system, what else can be uploaded via the data loading system?

a. GPS database.
b. Navigational database.
c. Entertainment data.

128. How is the information in the electronic library organized?

a. Task Oriented
b. Chronological
c. Function-oriented.

129. On modern aircraft, which mandatory component is used to monitor aircraft structure?

a. Central maintenance system.
b. Flight data recorder.
c. Quick access recorder.

130. In an aircraft which has Integrated Modular Avionics.

a. One "Black" box cover one functionality.
b. Each functionality is split in two dedicated 'black' boxes for redundancy
c. One "black" box hosts multiple application / functionalities.

131. One of the main advantages of Integrated Modular Avionics (IMA) is?

a. Less computers with more applications on board, which result in weight savings.
b. More computers on board, which result in faster data communication.
c. More computers on board, which result in more system automation.

132. Software which is used in IMA comply with:

a. Arinc 653 specifications
b. Arinc 100 specifications
c. Arinc 429 specifications

133. Airborne electrical AFDX cables are connected with:

a. Fibre-optic couplings.
b. 4-pins quadrax connections
c. 8-pins RJ-45 connections

134. The cabin video monitoring system consists of....

a. cockpit door surveillance and cabin video monitoring.
b. a passenger service module and a video camera.
c. information signs and cabin zone units.

135. The ability to send and receive emails by passengers is a typical example of:

a. A cabin network System/Server
b. A public address unit
c. Common Core System

136. When a modern aircraft is on the ground and parked at a gate. The InFlight Entertainment (IFE) system can receive and transmit data, using?

a. WIFI
b. An AFDX cable connection
c. HF Radio

137. The Cabin Video monitoring system is used....

a. to record behaviour of passengers and cabin crew, and can be used as evidence in legal proceeding.
b. to assist pilots in case of emergencies in determining the structural condition of the cabin/fuselage.
c. to detect unruly passengers.

138. The satellite communication (SATCOM) system is connected to?

a. The open data network.
b. The In Flight Entertainment system, only.
c. The isolated data network.

139. Where is the Electronic Flight Bag used for?

a. To reduce and replace paper-based reference material, used by pilots.
b. To communicate with the Flight-Operations department of the airline.
c. To interact with the critical flight systems and to assist the pilot in an optimized flight-path.

140. Can the flight crew of an Airbus A380 or Boeing 787 access real-time meteorological information?

a. No
b. Yes, when a datalink is available.
c. Yes, but only when an HF connection is available.