Question block created by wizard

This exam contains 140 questions.

1. When spoilers operate in ROLL mode, what happens to the spoiler panels?

a. They all move UP the same amount.
b. Only the spoiler panels are raised on the downward moving wing.
c. Only the spoiler panels are raised on the upward moving wing.

2. By high speed the elevons are a combination of....

a. elevators and the trailing edge.
b. ailerons and the rudder.
c. elevators and the ailerons.

3. When can ground adjustable trim tabs be adjusted?

a. In flight, with a control wheel.
b. In flight using an electric motor.
c. By a maintenance engineer.

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

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

5. What happens when an aircraft reaches its critical Mach number?

a. The aircraft is flying supersonic from that point on.
b. The wing cannot produce any more lift and the aircraft stalls.
c. A normal shock wave is formed on the wing.

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 is the definition of primary structure?

a. All the parts that support the loads of the aircraft on ground and in flight.

b. All the parts except the cabin interior.
c. All the parts that support the loads and provide aerodynamic shape to the aircraft.

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. In which of the following construction methods does the skin take up ALL the stresses?

a. Stressed skin 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. Paint
b. Electroplating
c. Cladding

12. To carry out a correct alignment check, the aircraft is jacked up. What must be done next?

a. Start with the alignment check.
b. Level the datum lines in the flight position.
c. Level the datum lines in the horizontal plane.

13. Which of the following compartments is usually unpressurized?

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

14. Why are non-magnetic bolts used on the front windshields?

a. They are less likely to be hit by lightning.
b. So they don't interfere with the standby compass.
c. They are stronger than other bolts.

15. To withstand compression loads, the upper wing surface is made of ....

a. AL-2024.
b. AL-7075.
c. AL-6025.

16. Integral fuel tanks are sealed by:

a. Rubber bladder tanks.
b. Rubber O-rings and gaskets.
c. Using sealant on all seams and rivets.

17. The section of the aircraft which supports the horizontal and vertical stabilizers is called:

a. Tall plane
b. Keel beam
c. Empennage

18. On the vertical stabilizer, which fittings take up the most of the lateral loads?

a. Aft fittings.
b. Top fittings.
c. Forward fittings.

19. The slats are supported by:

a. Hinges.
b. Straight tracks.
c. Curved steel tracks.

20. How can "FLUTTER" of the flight control surfaces be reduced?

a. By aerodynamic balancing.
b. By using trim tabs.
c. By mass balancing.

21. What is the purpose of a blow-out panel (inside a nacelle)?

a. To allow excess pressure to escape from the nacelle in case of a bleed duct rupture.
b. To allow pressure inside the nacelle to escape in case of fire.
c. To allow the air-pressure to equalize if the pressure inside the nacelle becomes lower than outside.

22. Which components are part of the firewall?

a. Exhaust cowling.
b. Hinged cowlings but only when open.
c. Hinged cowlings.

23. The RAM air supply is used....

a. only on unpressurized aircraft.
b. as an emergency air source on pressurized aircraft to ventilate the cockpit and the cabin.
c. as an alternate source to power the air-conditioning packs.

24. During normal stages of flight, the engine bleed air source comes from:

a. The high pressure stage of the compressor.
b. The low pressure stage of the compressor.
c. Ram air.

25. The EASA requirement for air conditioning systems state that the cabin air must be exchanged:

a. Every 3 to 5 minutes.
b. 3 to 5 times a minute.
c. Once every hour.

26. What is the recommended amount of water vapour in the conditioned air supplied to the cabin?

a. More than 40%
b. Between 30% and 40%
c. Zero

27. What are the 3 basic principles of an air cycle cooling system?

a. Surface heat exchange - combustion - energy conversion
b. Surface heat exchange - expansion - energy conversion
c. Compression - expansion - condensation

28. What happens to the air temperature and air pressure when it leaves the compressor ACM (Air Cycle Machine)?

a. The temperature will rise and the pressure will drop.
b. Both will be lower than the air going into the compressor.
c. Both will be higher than the air going into the compressor.

29. Why are mufflers installed in the air-conditioning distribution system?

a. As low frequency noise supressors.
b. To reduce the flow of air to the suppliers.
c. For heat regulation in the distribution system.

30. The pack controller cannot keep the pack temperature within limits. It will then ....

a. trigger a pack overheat and closes the engine bleed system.
b. close the bleed air from the recirculation fan.
c. trigger a pack overheat and shutdown the pack by closing the pack valve.

31. The outflow valve of a pressurized cabin system opens when the cabin pressure is....

a. too low.
b. too high.
c. too low or too high.

32. During take-off the outflow valve is selected to ....

a. modulating mode.
b. fully closed.
c. fully open.

33. What places the pressure controller in the depressurisation mode after landing?

a. Engines at idle and the landing gear compressed.
b. Engines at idle.
c. Landing gear compression.

34. How is the emergency pressure control valve operated if the automatic control system fails?

a. Manually
b. Electrically
c. Hydraulically

35. The emergency pressure control valve....

a. is electrically controlled.
b. is fitted to all pressurized aircraft.
c. is not a very refined way of controlling.

36. Which of the following instruments is NOT an air data instrument?

a. Vertical speed
b. Attitude
c. Airspeed

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

a. The attitude director indicator.
b. The I.L.S. indicator.
c. The horizontal situation indicator.

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

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

39. The critical angle of attack is:

a. Affected by angle of bank.
b. Not affected by the aircraft weight.
c. Different at different stall speeds.

40. When does the electronic attitude director indicator go automatically into composite display?

a. When the engine indication and crew alerting system display fails.
b. When the electronic horizontal situation indicator fails (EADI).
c. When selected by the crew.

41. Which type of fuel flow meter is commonly used in reciprocating engine aircraft?

a. Float type
b. Motor less type
c. Vane type

42. The Flight Director provides....

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

43. In a Fail Passive System;

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

44. The Passenger Entertainment System PES:

a. provides primary the passenger with information on ambient aircraft flight data, times and aircraft position in the fight plan.
b. provides Video, Music, Interactive Video Games and In-seat Telephone System.
c. provides attendant Call, Individual Reading Lights Control and No Smoking Light on/off.

45. The Cabin Interphone:

a. takes care of the communication among maintenance personnel during maintenance activities.
b. allows the cabin crew to communicate with each other and with the flight deck crew.
c. enables recorded announcements and boarding music to be broadcast through the PA system.

46. 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.

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

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

48. What happens at the end of the charge of a NiCad battery?

a. The cell voltage drops.

b. CO2 is generated,
c. The battery heats up.

49. What is the nominal voltage of a NiCad battery cell?

a. 24 volts.
b. 1.2 volts.
c. 2 volts.

50. The output of a single coil generator is

a. a flat line.
b. a sine-wave.
c. a saw foot.

51. What is the purpose of a rectifier?

a. Control the output voltage of a parallel wound generator.
b. Convert the AC output to DC.
c. Convert the DC output into AC.

52. The output sine waves of a 3-phase alternator will be separated by:

a. 60 degrees
b. 90 degrees
c. 120 degrees

53. Which of the following systems does not use a constant speed drive?

a. Integrated drive generator (IDG)
b. APU alternator.
c. Engine driven alternator.

54. The ram air turbine will supply....

a. three phase DC power.
b. DC power.
c. single phase AC power.

55. In a constant speed motor generator, what powers the generator?

a. A hydraulic motor powered by a hydraulic pump driven by the RAT.

b. An electric motor powered by the RAT generator.
c. An electric motor powered by the battery.

56. How is voltage regulation achieved on DC generators?

By changing the....

a. generator speed.
b. field current.
c. field voltage.

57. In a parallel bus configuration the generators will:

a. Each supply their own AC bus.
b. Divide the load, with the strongest generators taking the biggest load.
c. Share the load equally among them.

58. What provides overheat warning in a transformer rectifier unit?

a. Voltage sensor.
b. Thermal switch.
c. Thermocouple.

59. Which of the following statements about current transformers is true?

a. The secondary winding should never be left open when in operation.
b. The primary winding should never be left open when in operation.
c. Current transformers always have a square transformer core.

60. Which of the following circuit breakers CANNOT be reset while the fault exists?

a. Automatic reset circuit breaker.
b. Electromagnetic circuit breakers.
c. Trip free circuit breaker.

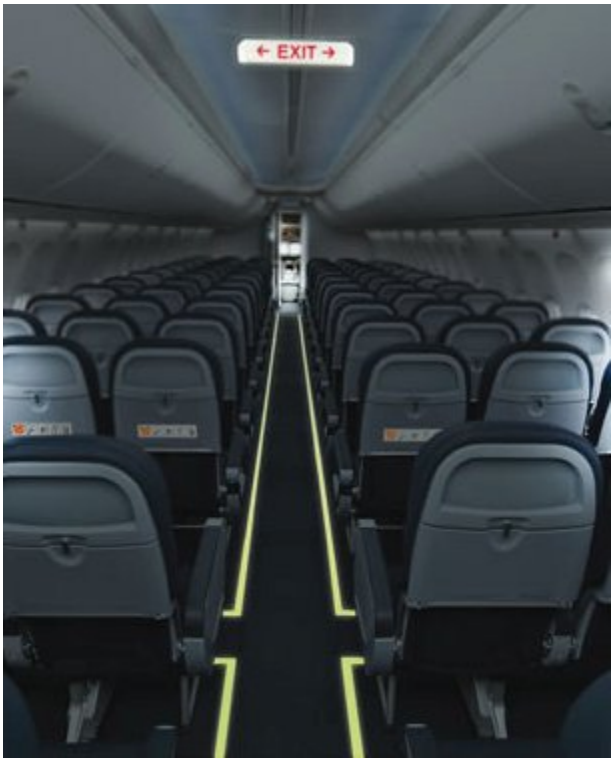
61. On a large commercial aircraft, which bus will be powered as soon as external power is connected?

a. Battery bus.
b. The external power bus.
c. The ground handling bus.

62. Comfortable seat cushions are often made of foam type materials. Is this authorized on an airplane?

a. Yes, but the cushions are covered with a fire blocking material, this will slow down the burning of the material.
b. Yes, but the cushions are made of a special foam, which cannot burn.
c. No, aircraft cushions are made out of pressed cotton and goose feathers. These pure natural products don't give toxic gases when burning.

63. Describe the picture and its use.



a. This is a fancy trim on the edge of the carpet. It looks nice on darker colours.
b. This is called the floor path lights. They will be illuminated by the crew during night flight to comfort of the passengers.
c. These are called "the emergency floor path lights". They will illuminate automatically when there is no power in the cabin and are used as exit guidance.

64. What is the "loose equipment layout"?

a. It is a numerical part-number list of all the safety equipment on board.
b. It is a checklist used by the cabin crew to easily check the expiring dates of the safety equipment.
c. It is a drawing of the cockpit and cabin, mentioning the required loose safety equipment, quantity and exact stowage location.

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

a. Yes
b. No, on large aircrafts the observer seat is usually very comfortable, but has not as many adjustment possibilities as the pilot seats.
c. 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.

66. 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.

67. How many cockpit seats do we find in a modern aircraft?

a. Mostly five. Captain, first officer, flight engineer, navigator, radio operator.
b. Mostly three. Captain, first officer and minimum one observer seat.
c. Mostly four. Captain, first officer, flight engineer and minimum one observer seat.

68. What is the best description for a "combi aircraft"?

a. This just means that the aircraft transport passengers as well as cargo. Passengers in the upper lobe, cargo in the lower.
b. This is an aircraft with a mixed configuration. This means that cargo also is loaded on the main deck passenger zone.
c. This is an aircraft with a mixed passenger configuration. This means that the aircraft has a mixed cabin lay out. (Ex. first/business/economy)

69. Which of the following areas in an aircraft would only have a smoke detection system and no extinguishing system?

a. Cargo bay.
b. Engines.
c. Avionics bay.

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

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

71. What type of fire detection system is a fenwal detection system?

a. Spot system.
b. Continuous loop system.
c. Thermocouple system.

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

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

73. Where is the lavatory waste bin fire extinguisher localized?

a. There is no extinguisher in the lavatory.
b. In lavatory ceiling.
c. Is usually located above the waste bin.

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

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

75. What indicates the yellow disk of a fire bottle (if installed) when it is ruptured?

a. That the fire bottle is due for inspection.
b. That the bottle has been fired.
c. That the pressure in the fire bottle was to high.

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

The halon-type portable fire extinguisher may be used....

a. for every kind of fire. In the cabin it will be used for fires coming from electrical equipment.
b. only for fuel fires. (All fuel types)
c. on solid materials combustible materials only.

77. Roll spoilers are used for ....

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

78. Why is there a balance tab installed?

a. For reducing the effort to move the flight control.
b. For dynamic balancing of the flight control.
c. Where the flight controls are found rather light during initial flight-testing.

79. What is the main advantage for commercial aircraft by using active load control?

a. Increased aircraft speed.
b. High manoeuvrability.
c. Reduced structural loading or airframe stress.

80. What is the purpose of a blow-back valve in the flap control system?

a. It prevents the flaps from being pushed back up by the air loads.
b. It allows the flaps to be retracted by using air loads instead hydraulic power.
c. It allows the air loads to push the flaps up if the aircraft is flying too fast.

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

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

82. A small input in a primary servo system of a hydraulic powered flying control system initiates ....

a. the same power output as the input initiated.
b. a large power output.
c. a small power output.

83. What is Mach correction?

a. The reduction of the feel force at high Mach numbers.
b. The increasing of the feel force at high Mach numbers.
c. The adjustment of the stabilizer position to compensate for the nose down tendency.

84. What type of aerodynamic balancing system is used on modern, powered flight control surfaces?

a. Balance tabs.
b. Servo tab.
c. None.

85. Where is the stall warning sensor of an electric stall warning system located?

a. On the fuselage below the cockpit windows.
b. In the wing leading edge.
c. On the fuselage above the cockpit window.

86. Where is the trim tank located?

a. In the wing box.
b. In the wing tips.
c. In the tail section.

87. What provides fuel tanks overflow for integral tanks?

a. Sump drain valves.
b. Surge tanks.
c. Fuel operated baffle check valves.

88. What are pressure switches in the fuel supply system used for?

a. Monitor the fuel output pressure of each pump.
b. Monitor the fuel pressure to each engine.
c. Monitor the fuel pressure in the fuel tanks.

89. What is an indirect drain valve used for?

a. To drain fuel when there is no drain valve installed.
b. To drain fuel when the valve is not located at the lowest part of the tank.
c. To drain fuel from the highest point of the tank.

90. What must be done to transfer fuel from one fuel tank to a fuel tank in the other wing?

a. All boost pumps must be on.
b. The crossfeed valve must be opened.
c. Not possible.

91. How is the amount of Fuel indicated to the pilots?

a. Volume (m^3)
b. Weight (Kgs or Lbs)
c. Height (cm or inch)

92. Which control switch would you never find on a refueling control panel?

a. Battery switch.
b. Fuel booster pump switches.
c. Fuel valve switches.

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

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

94. What is the advantage of a powerpack compared to a normal hydraulic system?

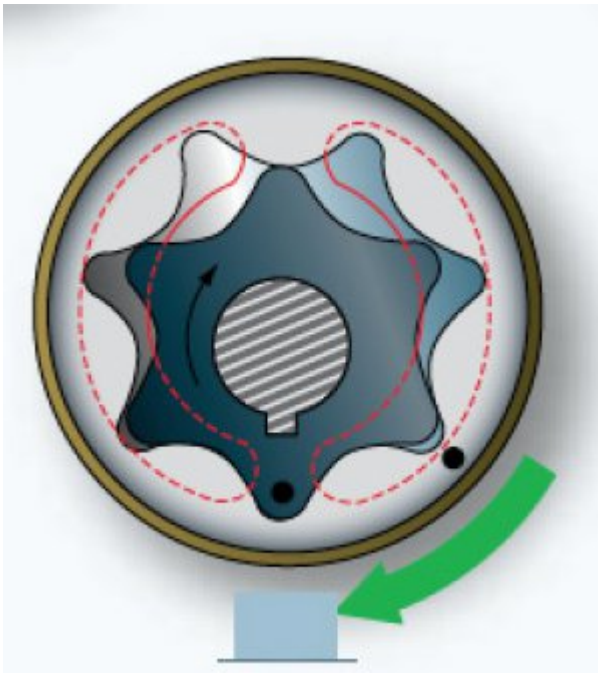
It is a....

a. self-contained system that does not require electrical power from the main electrical system.
b. self-contained system requiring no supply from the main hydraulic system.
c. more powerful system.

95. What defines a good hydraulic fluid?

a. A high fire point.
b. A low flash point.
c. A high viscosity.

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



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

97. What is the name of the hydraulic filter located in the pump supply line from the reservoir?

a. A return filter.
b. A low pressure filter.
c. A micronic filter.

98. What monitors hydraulic pump pressure?

a. Pressure switches.
b. Pressure sensors.
c. They are not monitored.

99. Which filter is generally cleanable and reusable?

a. No filter is cleanable or reusable.
b. Paper filter.
c. Wire wound filter.

100. Which of the following is a visual ice detector?

a. Hot rod ice detector.
b. Vibrating rod ice detector.
c. Radioactive ice detector.

101. Engine anti-ice systems are powered by:

a. Electrical heating mats.
b. Bleed air extracted from the on-side engine.
c. Pneumatic bleed air.

102. Electrical ice protecting systems can be used for....

a. de-icing as well as anti-icing.
b. De-icing only.
c. Anti-icing only.

103. After inadvertently applying rain repellant, you must....

a. the rain repellant dry before washing the windscreen.
b. immediately operate the windscreen wipers.
c. immediately wash the windscreen.

104. Which of the following statements is true?

a. Drainmasts are NOT heated on the ground.
b. Drainmasts heaters can be controlled from the flight deck.
c. Drainmast heaters go to a higher setting when in flight.

105. How does a pneumatic rain removal system work?

a. By using bleed air to operate pneumatic actuators to move the wiper blades.
b. By blowing high pressure bleed air over the windscreen.
c. By heating the windscreen with hot bleed air.

106. What is "wheel track"?

a. The horizontal distance between main and nose landing gear.
b. The amount of degrees the aircraft deviates from the straight ahead track while taxing.
c. The distance between left and right main landing gear.

107. After an emergency landing gear extension the door will:

a. Close.
b. Remain open.
c. Close if hydraulic power is available.

108. A red light inside the landing gear selector lever is illuminated, this means:

a. The landing gear is down and locked.
b. The landing gear is not in selected position.
c. The landing is up and locked.

109. What is a fusible plug?

a. A type of plug which melts when the tyre gets too hot.
b. A type of plug to quickly deflate the tyre before replacing it.
c. A type of valve which opens when the tyre pressure gets too high.

110. What are creep indicators?

a. A warning light in the cockpit to show that the aircraft has moved on the ground.
b. Shows how much a tyre has moved compared to the inner tube.
c. Shows how much a tyre has moved on the rim.

111. During take-off and landing, the rudder pedals can give:

a. Full nose wheel steering commands.
b. Limited nose wheel steering commands.
c. No nose wheel steering commands.

112. What is the advantage that stress sensors have over other air/ground sensing systems?

a. Is easier to replace.
b. More reliable.
c. Can measure aircraft weight.

113. Which lights can be used to detect ice build-up?

a. Wing scan lights.
b. Runway turn-off lights.
c. Position lights.

114. What kind of light is used as cabin flood lighting?

a. Spot lights
b. Incandescent lightbulbs.
c. Fluorescent tubes.

115. Which statement is true?

a. When the internal emergency light switch is used both internal and external emergency light come on.
b. Operating the internal emergency light switch only turns on the internal emergency lights.
c. When operating the external emergency light switch both internal and external lights come on.

116. Cabin chemical oxygen generators are located in?

a. The overhead bins.
b. The cargo hold.
c. The passenger service units.

117. What is the chemical used in chemical oxygen generators?

a. Sodium hydroxide
b. Ozone
c. Sodium chlorate and iron

118. The pressure regulator on an oxygen demand system regulates the pressure to:

a. 90 PSI
b. 70 PSI
c. 400 PSI

119. How can you see if a chemical oxygen generator has been expended?

a. By a pressure indicator.
b. By a pop-out indicator.
c. By a coloured band of thermal paint.

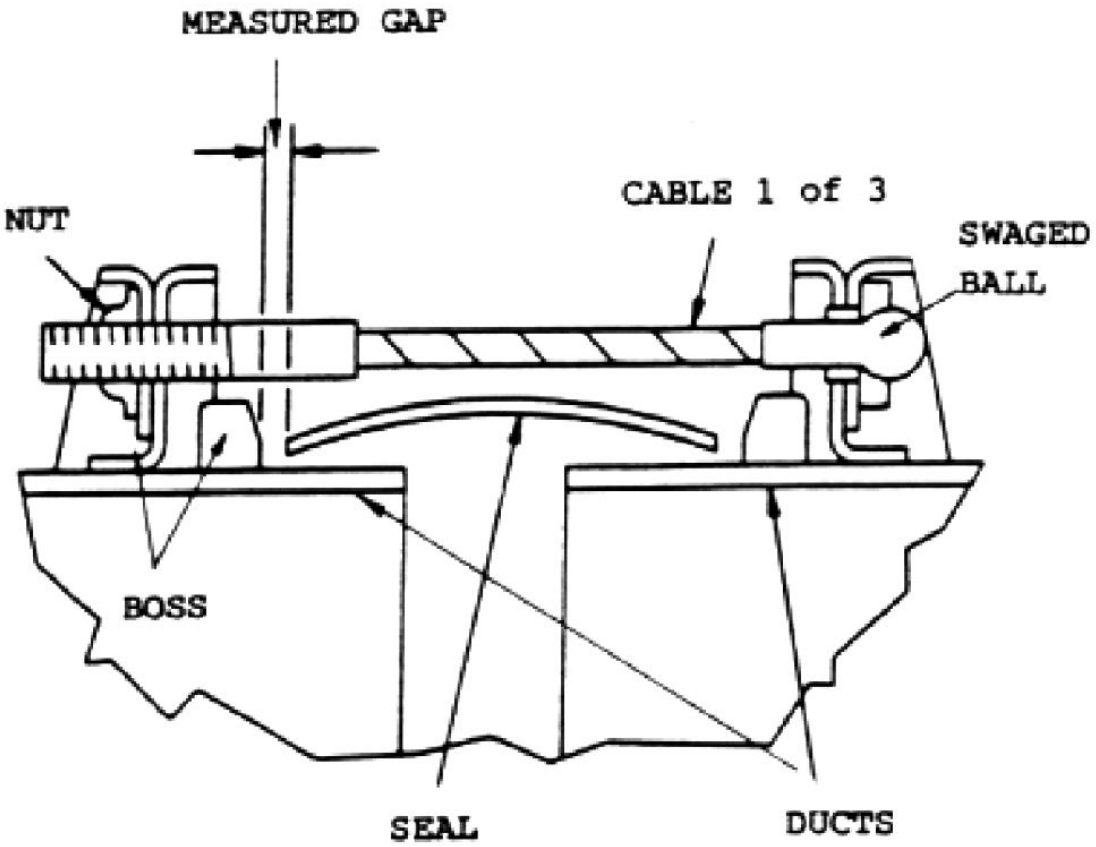
120. Compared to other power sources, what is the benefit of using pneumatic systems?

a. A fire can easily be put out by turn off the supply.
b. Easier to detect leaks.
c. Power to weight ratio is better.

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

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

122. When are cable attachment type of duct fitting joints used?



a. Ducts where high pressure changes exist.
b. Ducts where large temperature changes exist.
c. Large diameter ducts.

123. At low altitudes, what creates the vacuum for the water and waste system?

a. A vacuum pump.
b. The pneumatic system using ventures.
c. The pressure differential between the waste tank and the outside of the aircraft.

124. What is the reason that some large aircraft have 2 servicing panels for the water?

a. To be able to drain the system completely.
b. To service 2 tanks.
c. To service 1 tank but from two locations.

125. What is the toilet drain plug flapper valve used for?

a. Allows the tank servicing to be done via the drain hose.
b. Prevents the draining of toilet waste of tank when the cap is open.
c. Prevents the waste tank from emptying in flight.

126. Which bite test is initiated by the engineer?

a. Interruptive bite.
b. Start-up bite
c. Continuous bite

127. Early data loaders used magnetic tapes to store information, what was the biggest problem with these tapes?

a. They were slow
b. They required large carry-on equipment.
c. They stretched causing false data.

128. What type of data link is used by the electronic library system to communicate with ground operations?

a. Mono-directional Ethernet link
b. Arinc 429
c. Bidirectional gate link

129. Besides speed, temperature and pressure, what else is the engine monitored for?

a. Thrust
b. Vibration
c. Load

130. In an aircraft which has Integrated Modular Avionics....

a. all sensors submit information to the flight deck, using WIFI.
b. each passenger seat is equipped with an independent IMA unit, which can be used for In Flight Entertainment.

c. Flight Critical Information is processed by the IMA system.

131. Functions integrated in IMA are:

a. Basically for all aircraft systems.
b. Only for electrical powered systems.
c. Only for hydraulic powered systems.

132. The Boeing common computing resource (CCR) consists of:

a. 8 General processor modules
b. 2 General processor modules
c. 16 General processor modules

133. For an Arinc 664 network, the data transport rate is:

a. 100 Megabits per second
b. 1 Gigabits per second
c. 10 Megabits per second

134. The cockpit door surveillance system is used by....

a. air marshall.
b. the flight crew.
c. the cabin crew.

135. Typical location of the Passenger Control Unit (PCU) is, in the:

a. Passenger seat.
b. Avionics bay.
c. Overhead Bin, above the passenger.

136. Where can the passenger data base be found?

a. Only on a paper list in the cockpit for security.
b. Only at the airport of departure.
c. Loaded in the cabin network server unit.

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

139. The Electronic Flight Bag (EFB) can be used for?

a. Determining the maintenance history of the aircraft.
b. Both answers are correct.
c. Weight and Balance calculations.

140. A dedicated maintenance laptop using WIFI can be used for?

a. Accessing aircraft fault data.
b. Accessing to see and delete data from the Aircraft File Server.
c. Installing newly released navigation software.