Question block created by wizard

1. The axes (normal , longitudinal and lateral) of an aircraft will pass?

a. The Centre of Gravity.
b. The pressure point.
c. Zonal station 0.

2. What is an example of a primary flight control?

a. Slat
b. Spoiler
c. Aileron

3. The elevator is normally attached to....

a. the Dorsal fin.
b. the Rudder.
c. the Horizontal Stabilizer.

4. When an aircraft is trimmed....

a. all fuel tanks are equally filled with kerosene.
b. the pilot can fly loose hands.
c. all flight controls are calibrated on the 0 degrees.

5. Vortex generators....

a. are always installed underneath the wing.
b. are typically installed on low-speed piston engine powered aircraft.
c. try to avoid the separation of the airflow on the upper surface of the wing.

6. An elevon is a combination of....

a. an Aileron and Elevator.
b. a Rudder and Elevator.
c. a V-tail and Canard.

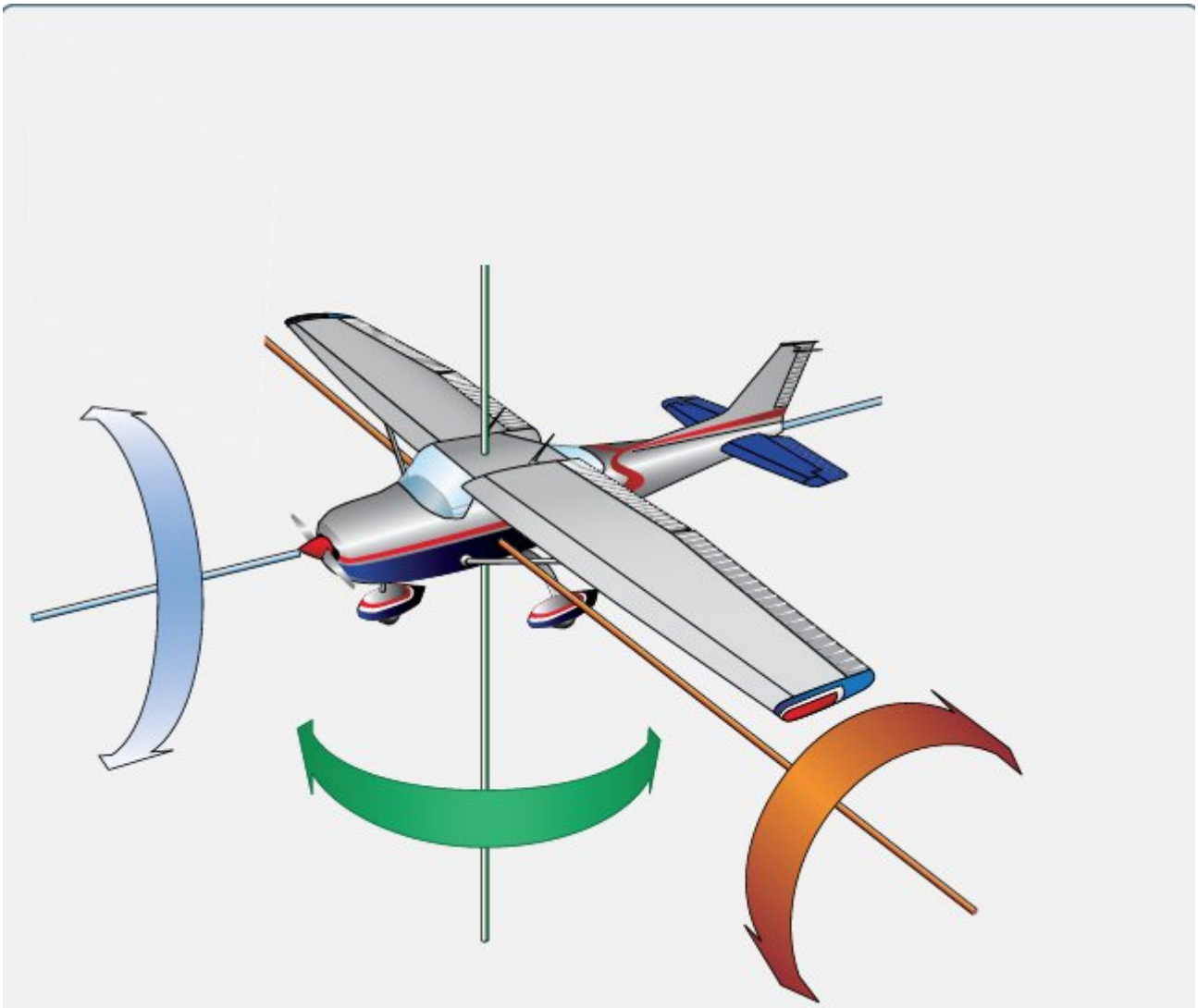
7. When spoilers operate in ROLL mode, what happens to the spoiler panels?

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

8. The variable incidence stabilizer provides....

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

9. Complete the numbered boxes.



Primary Control Surface	Airplane Movement	Axes of Rotation	Type of Stability
Aileron	1	Longitudinal	Lateral
Elevator/ Stabilator	2	Lateral	Longitudinal
Rudder	3	Vertical	Directional

a. 1 Roll; 2 Pitch; 3 Yaw
b. 1 Yaw; 2 Roll; 3 Pitch
c. 1 Dive; 2 Climb; 3 Turn

10. When can ground adjustable trim tabs be adjusted?

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

11. When a pitch input is given to an aircraft with ruddervators, what is the movement of the control surfaces on the tail?

a. They move in opposite directions.
b. They will move in the same direction.
c. They don't move.

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

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

13. Which flight control surface is shown in the figure below?

a. Ailerons.
b. Slats.
c. Leading edge flaps.

14. When using a ruddervator, what will happen when moving along the lateral axis?

a. The rudder and aileron will move.
b. The ruddervators will move in the same direction.
c. The ruddervators will move in opposite directions

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

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

16. Where are elevons installed?

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

17. When an aircraft moves through the air at high speed (supersonic), what happens?

a. A cooling effect will occur, and the fuel inside the fuel tanks must be additionally heated.
b. Moisture will immediately freeze on the aircraft, due to an abrupt pressure change.
c. Heat is generated.

18. The critical Mach number of a wing is?

a. Always less than 1

b. 1
c. Greater than 1.

19. In supersonic flight, an abrupt pressure difference is called a....

a. Turbulence.
b. Shockwave.
c. Bow wave.

20. If the Mach number is 0,74 then the category is?

a. Subsonic.
b. Supersonic.
c. Transonic.

21. When the angle of a wing sweepback increases?

a. The critical Mach number decreases.
b. The critical Mach number increases.
c. The critical Mach number remains the same.

22. In a supersonic engine inlet, the intake is divergent. Why?

a. to reduce the speed.
b. to increase the air density.
c. to reduce the pressure.

23. What has the biggest effect on the speed of sound?

a. Pressure.
b. Humidity.
c. Temperature.

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

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

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

a. A normal shock wave is formed on the wing.

b. The aircraft is flying supersonic from that point on.
c. The wing cannot produce any more lift and the aircraft stalls.

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

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

27. What type of wave is a "Bow Wave"?

a. Oblique shock wave.
b. Turbulence
c. Normal shock wave.

28. What is the main disadvantage of wing sweep back?

a. Less lift than a straight wing.
b. Wingtip stall before the wing roots.
c. Not useable on T-tailed aircraft.

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

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

30. What is the major advantage of fail-safe structural design?

a. It makes the structural construction simpler to build.
b. It is the cheapest way to build aircrafts.
c. It allows the detection of failure during the maintenance interval before it becomes catastrophic.

31. What is the difference between the "fail-safe" and "safe-life" principle?

a. It means the same but, fail-safe is used by the EASA, safe-life is more used by the FAA.
b. Fail-safe means that the system or part is still functional even when partially failed. Safe-life means that the part has a design operational limit and should be replaced.
c. Fail-safe means that it will not harm the aircraft when failed, while safe-life means that the part is designed to hold as long as the aircraft design life time.

32. Why do job cards mention zones?

a. They will identify a certain area of the aircraft to inspect or to locate the specific work area.
b. These are just codes for the engineering department to analyse the damage found in certain areas during maintenance.
c. The zone codes are the primary digits to find the part location in the parts catalogue.

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

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

34. What is the definition of primary structure?

a. All the parts that support the loads and provide aerodynamic shape to the aircraft.
b. All the parts that support the loads of the aircraft on ground and in flight.
c. All the parts except the cabin interior.

35. What is the definition of secondary structure?

a. All the parts in the cargo compartments and in the cabin interior.
b. All the parts that improve the aerodynamic shape of the aircraft, this may include control surfaces.
c. All the parts that support the loads of the aircraft in flight.

36. What is the meaning of a "fail-safe structural design"?

a. It means that in case of partial structural failure the pilot will be informed by a caution warning.
b. It is just a fancy expression used as commercial argument.
c. It indicates that structural loads are shared over multiple parts.

37. When talking about structural stresses, what do we mean with the term "strain"?

a. A strain is a deformation or a physical change caused by a stress.
b. This term is only used when there is a permanent deformation in the material.
c. It means the part broke completely.

38. What is the function of the Static dischargers?

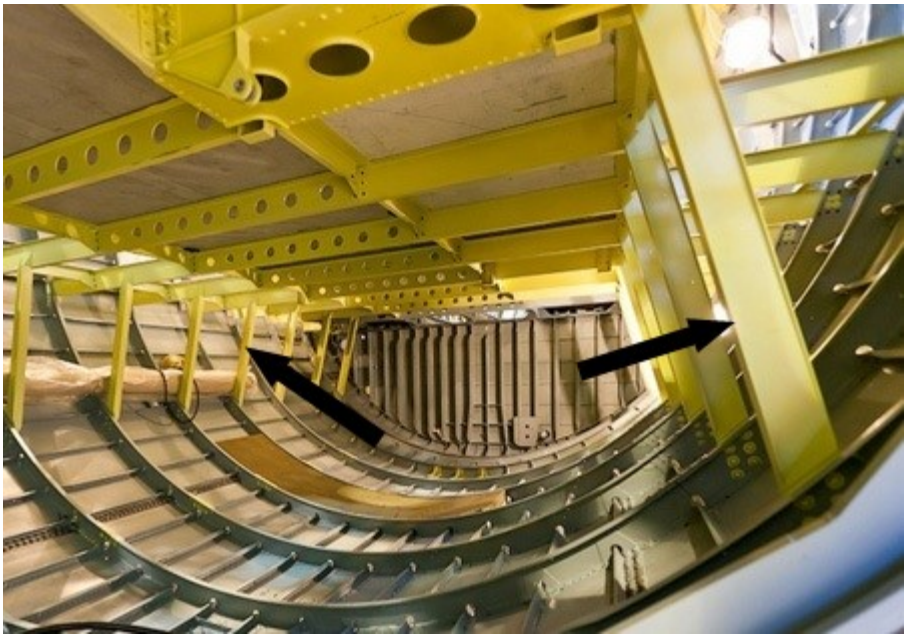
a. They function as a communication antenna.

b. In case of a static charge they lead the electrical energy off the aircraft.
c. They will protect the communication systems against a lightning strike.

39. 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.

40. How would you call this structural part (as indicated by the black arrow)?



a. A Pressure support. It supports the higher pressurization loads from the cabin area.
b. A strut. It will mainly take compressive loads.
c. A beam. It will mainly take bending loads.

41. What is a monocoque construction?

a. A monocoque construction is where the aircraft skin, strengthened by frames supports all the loads.
b. A monocoque construction is only made out of one material. Usually older wooden aircraft.
c. A monocoque construction is where the aircraft skin supports all the loads.

42. What is a semi-monocoque construction?

a. A semi-monocoque construction is where the aircraft frames and stringers supports all the loads.

b. A semi-monocoque construction is where the aircraft frames and stringers together with the exterior skin panels support all the loads.
c. A semi-monocoque construction is made out of two materials. Usually older aircrafts with a wooden structure with canvas.

43. Why are bulkheads used in an aircraft structure?

a. They are used on those places where compartments needs toe sealed off from each other.
b. They are only used in the front and the back of the fuselage to hold the pressurization.
c. They are used to give extra strength to those places where the basic structure is insufficiently strong for the loads.

44. Why are aft pressure bulkheads usually build as a dome?

a. A pressure dome is a light construction that can withstand large pressure loads.
b. The dome shape give some extra space within the cabin to give extra stowage for the galleys.
c. The dome shape is only used because it is the cheapest to build and has no aerodynamic function in the tail.

45. What is an "alclad" skin?

a. It is the product name given by ALCO, one of the biggest manufactures of aluminium.
b. it is a skin plate made out of an aluminium alloy coated on the exterior side with a thin layer of nearly pure aluminium for nice shiny effect.
c. It is a skin plate made out of an aluminium alloy coated on both sides with a thin layer of nearly pure aluminium for a better corrosion resistance.

46. Where do we usually apply honeycomb structures?

a. Only on the aerodynamic fairings and internal components like floor panels.
b. Only on the interior panels, honeycomb structures do not withstand humidity.
c. Floor panels, fairings, wing panels, flight control surfaces.

47. Talking about wing structures, what do we mean with a "cantilever monoplane"?

a. Wings constructions where the upper and lower panel supports all the loads.
b. Airplanes with no tail wings (stabilizers), often also called delta wings.
c. Is a design where the wing is attached to the fuselage and the wing is self-supporting.

48. Why do they use more and more bonded metal to metal joints on the latest aircraft?

A bonded metal to metal joint is....

a. normally stronger.
b. a fast way to construct. Time is money.
c. much cheaper because you don't need the rivets and labor.

49. As a mechanic, why should you protect a bare part of fuselage skin surfaces as soon as possible?

a. It can influence the conductivity of the fuselage. This is important in case of a lightning strike.
b. You want the aircraft paint finish to be nice, it represents your professionalism.
c. A painted surface is the cheapest way of corrosion prevention.

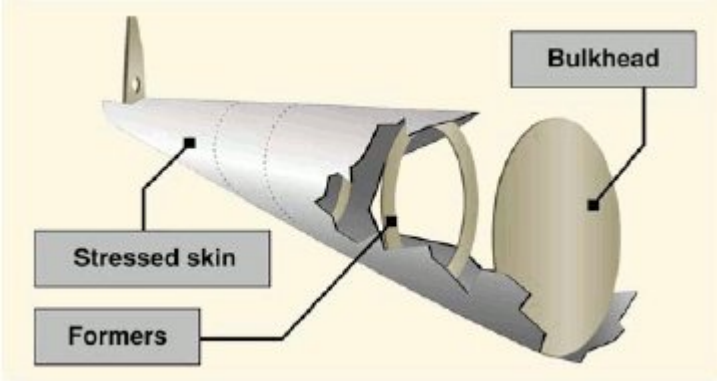
50. When would it be necessary to check the airplane symmetry?

a. When the SRM instructs you to do so after a doubler repair on the fuselage.
b. When the AMM chapter 05 instructs you to do so after an abnormal event.
c. This is a standard requirement after a heavy maintenance inspection as set in the maintenance program.

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

a. Monocoque.
b. Semi-monocoque.
c. Stressed skin construction.

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



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

53. What is a cantilever wing?

a. A wing attached at one end only.
b. A wing supported by struts and ties.
c. A wing attached in the middle.

54. What is the most widely used assembly method in aircraft construction?

a. Blind rivets.
b. Solid rivets.
c. Bonding.

55. 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.

56. "DINITROL" and "LPS-3" are what kind of surface protection?

a. Paint.
b. Phosphate coating.
c. Water displacing fluid.

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

a. Cladding
b. Paint
c. Electroplating

58. 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 horizontal plane.
c. Level the datum lines in the flight position.

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

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

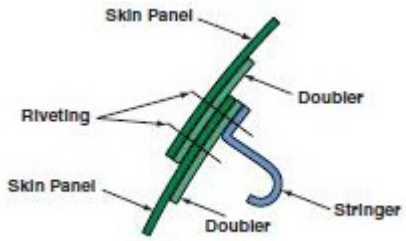
60. Buckled skin and torn rivets are indicators of:

a. Structural failure.
b. Deviations in aircraft a-symmetry
c. Bad construction.

61. What kind of structural joint is represented in this picture?

a. This is a butt joint, used to join different fuselage sections.
b. This is a section joint, only used in unpressurized areas.
c. This is a lap joint, only used in pressurized areas.

62. What kind of structural joint is represented in this picture?



a. This is called a butt joint.
b. This is called an overlapping joint.
c. This is called a lap joint.

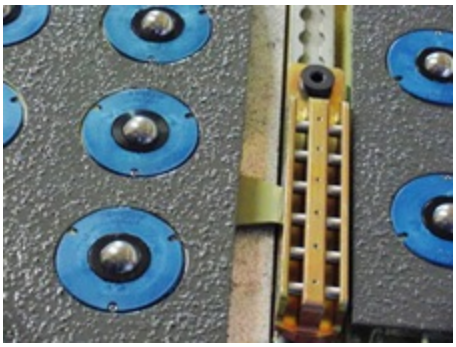
63. On a modern aircraft, which zones are not pressurized?

a. The 3 wheel wells, radome, wing and tail section.
b. The 3 wheel wells, tail section and the main avionics compartment.
c. The 3 wheel wells, tail section and forward cargo.

64. Why are there so many structural reinforcements around the landing gear attachments?

a. The landing gear loads are the largest on the aircraft and it requires a lot of reinforcement to transfer these loads into the aircraft.
b. You will find only a lot of structural reinforcements on aircraft with retractable gears. This is to support the big torque forces during gear retraction.
c. The main reason for these reinforcements is to support the vibrations while running over taxi ways. It is financially not possible to build taxi ways so smooth and even as the runways.

65. You will find this panel from this picture in the cargo compartment. What is the name and purpose of this panel?



a. Sliding carpet. Typical for older aircraft where the pallet loading is done manually.
b. Lifting ball panels. They provide a small space between the floor and the pallet to allow air ventilation. The perforated pallets are used for transport of fresh vegetables, flowers, etc.
c. A ball mat panel. They are installed in front of the cargo-door and allow an omnidirectional movement of the pallet.

66. What is a plug type door?

a. It is a door that is closed from inside to outwards, that way it pushes against its door stops and is impossible to force open when the aircraft is pressurized.
b. It is a door that is closed from inside to outwards, that way it pushes against its door stop. It needs a special locking because the door can be forced open when pressurized.
c. It is a passenger door that slides upwards into the interior ceiling when opened. (typical DC 10)

67. What is a non-plug-type door?

a. It is an outside type of door that is only used for very large doors such as cargo doors.
b. It is a door only used for non-pressurized areas.
c. Is a door that is closed from the outside. All the pressurization loads are carried by the hinges and the closing mechanism.

68. Why does a door pressurization seal have small holes at equal intervals?

a. These holes will keep the seal flexible and so increase its life time.
b. Via these holes the cabin pressure can enter the seal. The press difference will inflate the seal and this will provide a perfect sealing against the door frame structure.
c. These are ventilation holes. When descending from high altitudes (dry air) to low altitude (humid air) a lot of condensation will come between the door and the door frame. (icing danger)

69. How would you describe the layers of a cockpit window?

a. The window consists of an inner and an outer glass layer. In between there is an electrical heating element.
b. The window consists of an inner glass layer which is the main structural element, a synthetic middle layer as structural backup, a heating element and a hard glass outer layer.
c. The window consists of an air heated and ventilated inner glass layer, a synthetic middle layer, a hard glass outer layer which is also the main structural part.

70. What is a dummy window?

a. This window has a protection layer against passenger abuse.
b. It is the most inner cabin-window, and provides an acoustic damping.
c. It is a metal plug plate to cover the hole where a window is removed.

71. Where would you find rapid depressurization panels?

a. In the pressure bulkheads.
b. The wall linings of the cargo hold.
c. The bottom of the passenger cabin side walls.

72. Which of the following compartments is usually unpressurized?

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

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

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

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

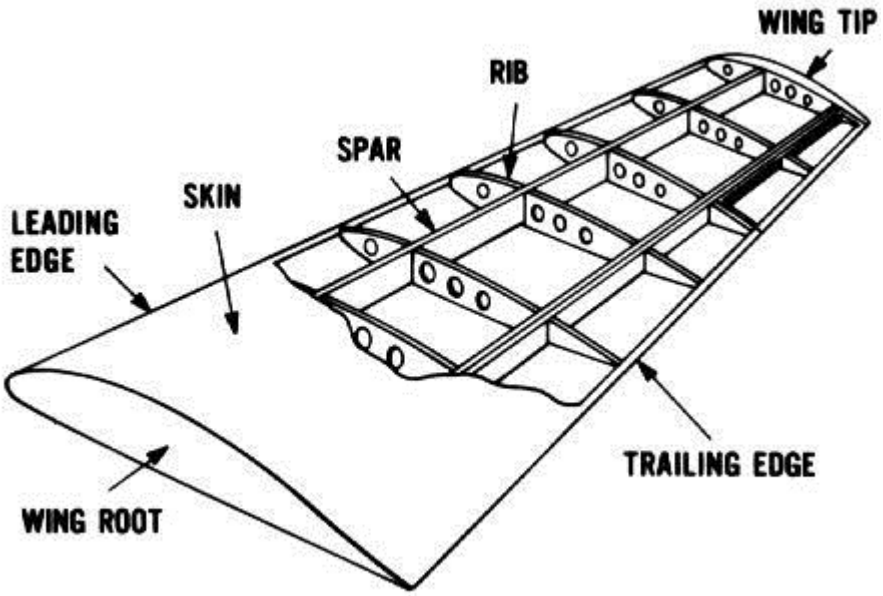
a. there is no need for special precautions.
b. there will be special flight conditions.
c. there will be separated goods in special containers.

75. The most common used floor material for passenger compartment floors are ....

a. aluminium reinforced and steel bars.
b. composite material.

c. aluminium.

76. How would you describe this type of wing structure?



a. A cantilever mono-spar wing.
b. A truss type mono-beam wing,
c. A semi-monocoque wing.

77. What kind of loads are mostly working on the wing skin panels during flight?

a. Both the upper and lower wing panel and receive compression loads.
b. The upper wing panel bears tension loads, the lower panel receives compression loads.
c. The upper wing panel bears compression loads, the lower panel receives tension loads.

78. Why do we find false spars or reinforcement ribs on some locations in the wing ?

a. You will find this only near the landing gear beam attachment. The main purpose is to support the important loads of the aircraft resting on its gears.
b. The main purpose of false spars and reinforcement ribs is to prevent slushing of the fuel to the wing tip when the aircraft takes a turn.
c. False spars and reinforcement can be found everywhere on the wing where extra support is needed for landing gear fittings.

79. Concerning the spoilers, which statement is correct?

a. Flight spoilers are used to increase lift.
b. Aircraft spoilers have the same function as on a car, they improve the aerodynamics.
c. Flight spoilers create drag and so can have a roll function or a speed brake function.

80. On modern aircraft, where can the fuel be stored?

a. In the engine pylons.
b. In the wings, in the centre-tank and stabilizer.
c. In the cargo area.

81. How can we prevent the fuel from leaking.

a. All the structural parts like rivets, spars, beams are sealed with a sealant to keep the tank fuel tight.
b. The fuel is always stored inside bladder tanks, installed inside the wing structure.
c. All the fuel tanks are inside coated with a layer of rubber which keep the fuel tank tight.

82. What is the function of false ribs or nose ribs?

a. They shape the leading edge of the wing.
b. They shape the wing surface but do not add to the structural strength of the wing.
c. They provide support for the mounting of the landing gear.

83. The lower wing surface is made of AL-2024 to withstand ...

a. tension loads.
b. shear loads.
c. compression loads.

84. The upper wing surface is made of AL-7075 to withstand ....

a. compression loads.
b. shear loads.
c. tension loads.

85. To withstand tension loads, the lower wing surface is made of ....

a. AL-2016.
b. AL-2024.
c. AL-7075.

86. When there is an extra wing spar installed for the landing gear, this is called the .....

a. false spar.
b. mid spar.
c. afts spar.

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

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

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

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

89. Integral fuel tanks are sealed by:

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

90. Access into an integral fuel tank by:

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

91. What are rigid fuel tanks usually made of?

a. Stainless steel
b. Plastic
c. Light alloy

92. What can be an advantage of a T-tail configuration?

a. The stabilizer needs a smaller surface, reducing drag.
b. It creates the possibility to have rear mounted engines.
c. The horizontal surfaces are out of a potential turbulent air stream created by the main wings or the engines attached to the wing.

93. How is a vertical stabilizer build?

a. A vertical torque box made out of two main spars and ribs, a leading and trailing edge, a dorsal fin. A rudder panel is attached to the aft spar fittings.
b. Mostly it is built like the fuselage structure principle. Beams and stringers covered with skin panels. A monocoque structure.
c. On modern airplanes the vertical stabilizers is always of the mono-spar principle. The spar is always aft since it has to carry the rudder.

94. What do we mean when we talk about empennage?

a. Sometimes also referred to as Dorsal Fin
b. The empennage is the complete mid and aft section of the aircraft.
c. The empennage is the assembly of the horizontal and vertical control surfaces and stabilizers.

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

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

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

a. Empennage
b. Keel beam
c. Tall plane

97. What kind of stability provides the horizontal stabilizer?

a. Longitudinal.
b. Directional.
c. Lateral.

98. What kind of stability provides the vertical stabilizer?

a. Directional.
b. Longitudinal.
c. Lateral.

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

a. Forward fittings.

b. Top fittings.
c. Aft fittings.

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

a. Bonded
b. Bolted
c. Riveted

101. Where are the pivot points of the trimmable horizontal stabilizer located?

a. At the rear of the tail cone-structure.
b. At the front of the tail cone-structure.
c. The trimable horizontal stabilizer does not have pivot points.

102. Where are static dischargers normally installed on flight controls?

a. Trailing edge.
b. Nose edge.
c. Leading edge.

103. Which flight controls need to be balanced?

a. Flight spoilers.
b. Flaps.
c. Aileron and tabs, rudder and tabs, elevator and tabs.

104. On what location do we find the dynamic balance weight on a control surface?

a. Aft of the hinge point axis line.
b. On the hinge point axis line
c. In front of the hinge point axis.

105. When we talk about balance tabs and balance weights, is there a difference?

a. Yes, balance weights are always installed to have a static balance of the control panel around his hinge points. Balance tabs is a construction that will provide an aerodynamic force assistance when the control panels move.
b. Yes, ones the balancing is done via a separate panel, the other method is used by added weights on the control panel.
c. No, it is a different name used by the two biggest manufactures.

106. To eliminate flutter by high speed flight, control surfaces should be....

a. balanced.
b. extended.
c. locked by the pilot.

107. The slats are supported by:

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

108. Elevator range of movement is:

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

109. Krueger flaps are a type of:

a. Leading edge high lift device.
b. Lift dumping device.
c. Trailing edge high lift device.

110. Which of the following is used to aerodynamically balance a control surface?

a. Anti-servo tab.
b. Balance weight.
c. Balance panel.

111. Flutter can be reduced by using?

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

112. Why are flight controls mass balanced?

a. To reduce flutter.
b. To reduce the force required to move them in flight.
c. To ensure aircraft centre of gravity remains within limits.

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

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

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

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

115. What is used to reduce the possibility of flutter of control surfaces?

a. Dynamic balance.
b. Aerodynamic balance.
c. Mass balance.

116. Why is the leading edge of the nose cowl of an engine made out of metal?

a. Cost, such a round bended shape in composite is too expensive.
b. Resistance for bird strike impacts. Metal is stronger and the risk is potential.
c. The nose cowl leading edge needs to be anti-iced with hot air.

117. What should be the general function of a fire seal?

a. Drain fluid leaks. Contain hot air gasses within the section.
b. Prevent entry combustible fluids in dangerous areas.
c. Ensures propagation of the fire to other compartments where it can be extinguished.

118. What materials are usually used to make a fireproof compartment?

a. Stainless steel, titanium or Kevlar composites.
b. Stainless steel, titanium or 7075-T3 heat resistant aluminium.
c. Stainless steel, titanium or thermoplastics.

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

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

120. 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.

121. Where on a nacelle would you find acoustic panels?

a. Intake and exhaust.
b. Intake and turbine cowls.
c. Fan cowls and pylon.

122. Which components are part of the firewall?

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

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

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

124. Which of the following materials is NOT used for firewalls?

a. Thermoplastics.
b. Titanium.
c. Aluminium alloy.

125. Name the different sources which can supply air to the aircraft systems while the aircraft is in flight:

a. Each engine and the APU.
b. Each engine, the APU, the RAT (Ram air turbine).
c. Each engine, the APU, emergency compressed air (stored in high pressure bottles).

126. Name the different sources which can supply air to the aircraft systems while the aircraft is on ground:

a. Each engine, the APU, emergency compressed air (stored in high pressure bottles).
b. Each engine and the APU.
c. Each engine, the APU or an pneumatic ground source.

127. Can the cabin be air conditioned when the packs are inoperative?

a. Yes, in flight by the emergency ram air conditioning pack. On ground by an external air-conditioning ground source.
b. No, conditioning air can only be supplied by the packs.
c. Yes, but only on the ground by an external air-conditioning ground source who supplies conditioned air directly into the cabin.

128. Some aircraft are equipped with an emergency ram air system. What is the function of this system?

a. When active, the kinetic energy of the ram air will power a small emergency air-conditioning pack.
b. When active, the ram air will be cool in the inoperative packs to prevent an overheat.
c. When active, it will discharge the cabin pressure and allows direct cold ram air into the cabin.

129. At most airports an external air-conditioning source is connected. Why is this done?

a. Because of safety. The packs, located just below the centre fuel tank, produce a lot of heat and are not sufficiently cooled when the aircraft stands still.
b. Because of noise restrictions at the gate. If the pack has to work the APU has to run.
c. An external air-conditioning source is more economical.

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

A turbo compressor....

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

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

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

132. Why does the engine bleed air supply come from the low and high stage of the compressor?

a. If the low pressure stage cannot supply enough air, the high stage will be used.
b. If the low pressure stage supply fails, the high stage takes over.
c. Some bleed air systems will use only the low pressure stage, others will use the high stage.

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

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

134. The RAM air supply is used....

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

135. Which of the following bleed air sources CANNOT supply the aircraft systems in flight?

a. Engines.
b. Pneumatic ground cart.
c. Auxiliary power unit.

136. Why do we need a cabin environment system on board of a modern airliner?

At economic cruising altitudes, the air is too....

a. dry and due to the high aircraft speed we need to control the air flow speed within the cabin.
b. cold and contains not enough oxygen to survive.
c. dry and too cold to survive.

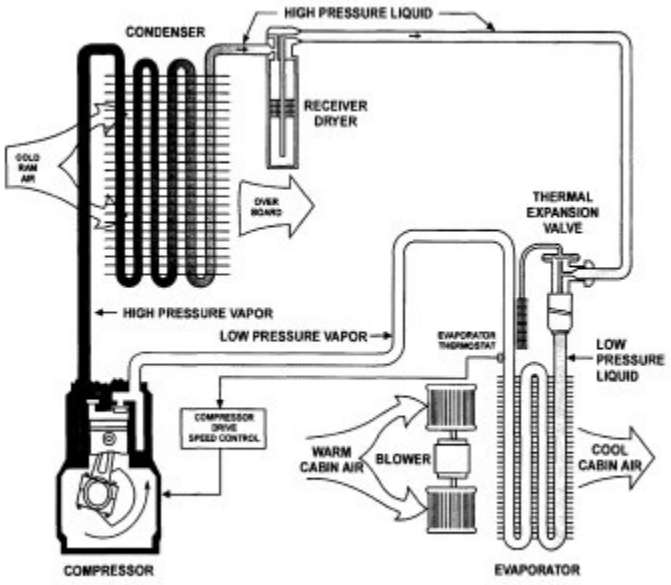
137. On modern aircrafts what can be regulated by the environmental systems to improve the comfort?

a. Pressure, temperature, air flow speed through the cabin.
b. Temperature, humidity, smell (added perfume).
c. Pressure, temperature, humidity.

138. In what comfort range of temperature can an environmental system regulate the temperature?

a. From 2° to 30° approximately. The comfort range for human but also extra cooling for the electronic equipment.
b. From 2° to 40° approximately.
c. From 20° to 30° approximately. The comfort range for human.

139. What type of air-conditioning system is shown in this picture?



a. The double cooler air cycle machine.
b. The vapour cycle machine.
c. The condensor re-heater air conditioning system.

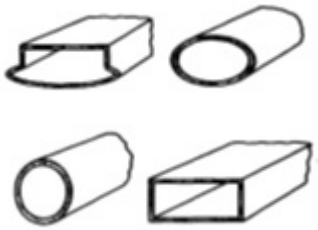
140. In an air-conditioning pack, what is the main component that will produce the cold air?

a. The compressor part of the air cycle machine. The faster it turns, the colder the exit temperature.
b. The turbine part of the air cycle machine. The faster it turns, the colder the exit temperature.
c. The flow control valve. The less flow the colder the exit air of the pack.

141. In an air-conditioning pack, why do we have an anti-ice valve and how does it work?

a. To protect the system when icing occurs in the water separator. Hot air from the anti-ice valve will close as protection the pack flow valve.
b. To protect the system when icing occurs in the water separator. Hot air will bypass the ACM and be used to heat up the water separator.
c. To protect the system when icing occurs in the turbine exit. Hot air will bypass the ACM and so the turbine will slow down.

142. What kind of cross section is mostly used for distribution ducts?



a. Circular cross section where ever possible. Other cross sections will be used if installation space does not allow it otherwise.
b. Square cross sections. Other cross sections will be used if installation space does not allow it otherwise.
c. Circular for smaller cross sections, square for the bigger sections.

143. Does the temperature in the cabin remain stable once regulated?

a. No, it will change a lot during boarding, during climb and descent.
b. No, it will change a lot, depending on the engine thrust settings.
c. Yes, it does not change much once stabilized.

144. What is the working principle of an air-conditioning with a zone trim system?

a. The packs are delivering a basic temperature, each separate zone receives some extra cold air depending on temperature demand for that zone.
b. The packs are delivering a basic temperature, each separate zone receives some extra hot air depending on temperature demand for that zone.
c. On the exit of the ACM (Air Cycle Machine) some trim air, hot or cold, is added to obtain the required temperature.

145. Why have modern aircraft a zone temperature regulation?

a. The main reason is that since the air flows backwards towards the outflow valve, the more aft in the cabin the hotter it gets.
b. For the work comfort of the flight attendants, they can select a cooler temperature for the passengers.
c. The passenger himself generates a lot of heat. So depending the occupancy of the zone (example: first versus coach), you win in comfort when each zone can be regulated separately.

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

a. Humidifiers
b. Water injection

c. Water separation

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

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

148. Besides supplying conditioned air, what is another function of the air conditioning system?

a. Supply cooling air for the avionics equipment.
b. Pressurize the hydraulic reservoirs.
c. Supply air for wing anti-ice.

149. 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.

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

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

151. What is the cabin temperature range of an air conditioning system (in currently used Commercial Aircraft) ?

a. Between 21 F and 27 F.
b. Between 21 °C and 27 °C
c. Between 18 °C and 36 °C

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

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

153. Which of the following statements is correct?

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

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

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

155. What is used as the cooling medium in the primary heat exchanger?

a. Bleed Air
b. Water
c. Ram Air

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

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

157. The cockpit air is supplied from:

a. The air conditioning pack before it goes into the mixing unit.
b. The forward cabin air supply duct.
c. The mixing unit.

158. What is an advantage of using an recirculation system?

a. It is possible to get more cold air.
b. It can detect a fire in the system.
c. Less fuel consumption.

159. Is it possible to disable the recirculation fans in the air distribution system, when there is a fire detected?

a. No.
b. Only when the engines are shutdown.
c. Yes.

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

a. 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.
b. Hot air from the anti-ice valve will close as protection the pack flow valve.
c. Hot air will bypass the air cycle machine (ACM) and so the turbine will slow down in rpm.

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

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

162. Cold air from the air-conditioning packs enters first the ....

a. gasper fan.
b. recirculation fan.
c. mixture unit.

163. What happens if an air conditioning pack overheats?

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

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

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

165. How is the pack temperature controlled?

a. By the ram air doors and the trim air valve.
b. By the turbine bypass valve and the trim air valve.
c. By the turbine bypass valve and ram air doors.

166. With the zone temperature control valve it is possible to adjust .....

a. the amount of cold air from the mixer unit to reach the desired zone temperature.
b. the amount of hot air that is mixed with the cold air from the air-conditioning pack, to reach the desired zone temperature.

c. the amount of air after the turbine from the air-conditioning pack will be mixed to reach the zone temperature.

167. Why does an aircraft needs to be pressurized?

a. If we do not pressurize we cannot heat the cabin.
b. Passenger comfort, but it is not necessary .
c. To create, by pressurizing, a safe atmosphere.

168. What is "Cabin differential pressure"?

a. It is the control pressure signal send to a pneumatically operated outflow valve.
b. It is the pressure ratio between the cabin inside pressure and outside altitude pressure.
c. It is the pressure altitude equivalent to the altitude where the aircraft is flying. (created atmosphere).

169. What is the greatest effect if pressurization on an aircraft?

a. It creates small air leaks between the rivets and the skin. Earlier, when smoking on board was still allowed, this was clearly visible by the nicotine leak marks around the rivets.
b. It is one of the factors that causes metal fatigue of the fuselage.
c. As long as you do not over pressurize it has no special effect on the aircraft.

170. What are the basic components in an pressurization system?

A pressure controller and a control panel, an outflow valve,....

a. a pressure relief valve and negative pressure relief valve.
b. a negative relief valve.
c. an equipment cooling exhaust valve, a negative relief valve.

171. What is the role of a ground-air signal in the pressurization system?

a. It will cut the power to the outflow valve once in ground mode.
b. It is used by the controller to calculate the pressurization profile for the next flight.
c. It will determine when to start and to stop the pressurization cycle.

172. What is the role of the altitude warning alert in a pressurization system?

a. It will alert the crew that the cabin has reached the max altitude as calculated for that flight.
b. It will warn the pilot with a single chime sound that he has to select the height altitude mode for the controller.

c. It will alert the crew that the cabin pressure is climbing to a dangerous cabin altitude for the passengers.

173. How is the pressure inside the cabin controlled?

a. By controlling the amount of bleed air to the air conditioning packs.
b. By regulating the air conditioning pack output pressure.
c. By using one or more outflow valves.

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

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

175. 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.

176. The standard cabin pressure during flight on civil airliners is....

a. maintained on ground level conditions.
b. is equal to the air pressure on 15000 feet.
c. is equal to the air pressure on 8000 feet.

177. The constant-differential pressure operation mode cabin is when the cabin altitude....

a. remains the same as the flight altitude.
b. remains constant as the flight altitude changes.
c. is maintained at a constant amount above the outside ambient air pressure.

178. What is the function of the positive pressure relief valves?

a. They prevent negative cabin pressure differential.
b. They control cabin pressure and ensure the cabin altitude does not go above 10.000 ft.
c. They relieve excess cabin pressure.

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

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

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

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

181. The outflow of air from the cabin is regulated by ....

a. trim valve.
b. vent valve.
c. outflow valves.

182. During the take-off mode the outflow valves are in the pre-pressurisation position. How do the outflow valves move?

a. Move to open position.
b. Move towards closed.
c. In the modulating mode.

183. In a modern electronic pressurization system, what happens if the automatic cabin pressure controller fails?

a. The standby cabin pressure controller takes over.
b. The crew has to control the cabin pressure manually.
c. The pressurization system is inoperable and the aircraft must descend to a lower altitude.

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

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

185. 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.

186. After landing the outflow valve is set to release the remaining pressure....

a. full open at touchdown.
b. at a fixed rate.
c. rapidly open.

187. Ditching control is used for .....

a. closing all valves and inlets.
b. deploying life rafts.
c. rapidly aircraft depressurisation.

188. What are some of the most important precautions to take when working at the air systems?

a. Make sure that the engine and apu igniters systems are deactivated.
b. Make sure the system is depressurized and deactivated.
c. Make sure you have the correct tools. Some titanium ducts can be damaged by chrome molybdenum wrenches. Expensive damage will follow.

189. What do you have to check before you connect a ground pneumatic or air-conditioning group to an airplane?

a. Make sure the ground group will not shut down unexpectedly, which could cause an aircraft over temperature.
b. Make sure the ground group delivers air that is within the aircraft limitations. Pressure, temperature, flow capacity should be within limits.
c. Make sure the ground group delivers air pressure that response to the operators limitations.

190. Why is it so important to check that you never apply a negative pressure in the air-conditioning and ventilation ducts?

a. Some of the ducts are thin wall ducts. They can handle positive pressure but will collapse on negative pressure.
b. A negative pressure will produce a reverse flow in the system. This can damage the check valves.
c. With a negative pressure you will risk to drive the ACM (Air Cycle Machine) in the wrong direction. This will damage the bearings of the ACM.

191. What precaution should you take during a pressurization test?

a. Make sure that no doors can be opened (passengers or cargo) which could produce a rapid depressurization.
b. Special Air Protection, to avoid damage to hearing during a rapid depressurization.

c. Be sure everybody is warned for the noise.

192. What precaution should you take while you are working on the air supply systems? (engine and airco)

a. Make sure that the aircraft is grounded.
b. Make sure that upon removal of a duct or component the ports are immediately capped. This will prevent contamination falling into the system.
c. Always have a printed version of the AMM next to you.

193. 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.

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

The crew can....

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

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

a. Electrically
b. Manually
c. Hydraulically

195. In case of a pneumatic duct leak, the crew must....

a. turn temperature control to full cold.
b. isolate the faulty duct.
c. land immediately.

196. What protects the aircraft from over-pressurization?

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

197. Static pressure:

a. is the dynamic pressure of the air due to the forward motion of the aircraft.
b. is the outside air pressure at the instant of measuring.
c. is the total pressure inside the aircraft.

198. The basic T arrangement:

a. consists of two turn coordinators and a vertical-speed indicator.
b. consists of an attitude indicator, airspeed indicator, altimeter and heading indicator.
c. consists of an attitude indicator, a vertical-speed indicator and heading indicator.

199. QNH:

a. means elevation of the aircraft above an airport.
b. means elevation of the aircraft on flight level.
c. means elevation of an aircraft above-sea level.

200. An attitude Indicator:

a. displays a pictorial plan of the aircraft's situation in the horizontal plane.
b. gives a representation of the aircraft to its horizontal axis.
c. gives a representation of the aircraft's pitch and roll attitudes relative to the earth.

201. A 'standard rate turn' on a Turn Coordinator, means that the aircraft completes a....

a. 180-degree turn in two minutes.
b. 360-degree turn in one minute.
c. 360-degree turn in two minutes.

202. A wing will stall....

a. due to excessive Fuel weight, 'G' loading or angle bank.
b. at any airspeed, altitude and power setting, and it always stalls at the same AOA.
c. when the airflow separates due to a minimum of AOA.

203. The angle of attack transducer:

a. has the same angle as the main wings.
b. is mounted on the side of the aircraft.
c. creates extra lift to the aircraft.

204. The AOA (Angle of Attack) indicator:

a. is mounted on the side of the aircraft.
b. provides the pilot an indication of the bank angle of the aircraft.
c. provides a visual warning of an impending stall.

205. The Electronic Attitude Director Indicator (EADI):

a. presents a selectable, dynamic colour display of flight progress and plan view orientation.
b. also allows other features such as MAP and Weather Radar displays to be selected.
c. is indicating pitch and roll attitude.

206. The Engine RPM Indication

a. indicates the rotational speed of the engine.
b. of the engine is using thermocouples.
c. is the ratio of turbine discharge pressure to compressor inlet pressure.

207. The primary engine parameters:

a. are only displayed to a flight engineer.
b. are presented by the EFIS upper display unit.
c. are only available in the maintenance mode for fault finding and verification testing of major subsystems.

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

a. Attitude
b. Airspeed
c. Vertical speed

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

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

210. A bourdon tube is commonly used in which type of instrument?

a. Differential pressure indicators.
b. Instruments which measure high pressure.
c. Very sensitive low pressure instruments.

211. Which of the following instruments is NOT a gyroscopic instrument?

a. Turn co-ordinator
b. Slip indicator
c. Altitude director indicator

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

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

213. What is "compass swing"?

a. A maintenance task to reduce the deviation error of a magnetic compass.
b. A maintenance task to align a magnetic compass true north.
c. A mount for a magnetic compass to minimize the "swing" of the compass card.

214. 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.

215. 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.

216. When does the stick shaker activate?

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

217. The purpose of an AOA (Angle of Attack) indexer is?

a. To generate an audio AOA warning during normal flight.
b. To sense the actual AOA outside the aircraft.
c. To provide an AOA indication with coloured symbols during a landing approach.

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

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

219. The partial compass format of an EHSI shows:

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

220. The radio altimeter....

a. The radio altitude indication is operational above 25000ft.
b. The radio altitude indication is displayed on the EADI.
c. gives full time altitude information on the altimeter.

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

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

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

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

223. What is used to measure exhaust gas temperature?

a. Thermocouples.
b. Temperature bulbs.
c. Temperature switches.

224. In a Fail Passive System;

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

225. The Flight Director provides....

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

226. To provide the correct amount of rudder deflection to cancel the Dutch Roll is also called;

a. glide slope
b. pitch trim
c. yaw damping

227. What is pitot pressure?

a. It is the dynamic pressure of the air due to the forward motion of the aircraft.
b. It is the total pressure inside the aircraft.
c. It is the outside air pressure at the instant of measuring.

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

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

229. The Cabin Interphone:

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

230. The system that allows long distance voice communication is called:

a. Very High Frequency communication (VHF).
b. High Frequency communication (HF).
c. Selcal communication.

231. The Cockpit Voice Recorder....

a. records all voice information of the cabin crew and the passengers.
b. allows a minimum of 30 minutes of recording.

c. contains also all engine and systems parameters.

232. The Passenger Entertainment System PES:

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

233. What system is used to transmit or receive automatically or manually generated reports or messages to or from a ground station?

a. The Multichannel Aviation Satellite Communication System (MCS SATCOM).
b. The Aircraft Communication Addressing and Reporting System (ACARS).
c. The SELCAL (Selective Calling) system.

234. The DME Distance Measurement gives information about:

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

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

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

236. The system that determines the distance between the aircraft and the runway threshold is called:

a. ADF-system.
b. VHF-navigation system.
c. Marker Beacon system.

237. When you replace an aircraft battery:

a. use of applicable aircraft manuals is essential.
b. appropriate lifting devices are not necessary.
c. after battery replacement, no testing or maintenance is required.

238. An aircraft battery charger:

a. stops charging if there is a AC supply under-voltage (134V)
b. charges all batteries in the aircraft.
c. is charging one particular battery.

239. A Lead-acid aircraft battery

a. can provide 28 VDC to an electrical aircraft system.
b. has 12 cells, 1,2 VDC each.
c. has a nominal voltage of 24 VDC.

240. A Ni-cd aircraft battery thermal run away:

a. is the result of a battery-charger over-temperature.
b. can result in a frozen battery.
c. can be stopped by removing the charging source.

241. A Ni-cd aircraft battery:

a. has 20 cells, 1,2V each.
b. has a nominal voltage of 28 VDC.
c. has a nominal voltage of 24 VAC.

242. Ni-cd aircraft batteries:

a. must be stored outside in a well ventilated area.
b. can be stored with other types of batteries.
c. may not be stored in the same area as Lead-acid batteries.

243. A transformer rectifier unit converts....

a. 115 V_{AC} into 28 V_{DC}.
b. 115 V_{AC} into 28 V_{AC}.
c. 28 V_{AC} into 115 V_{DC}.

244. An aircraft battery:

a. provides direct power for an emergency AC battery bus.
b. provides power for apu starting.
c. provides power for the transformer rectifier unit (TRU).

245. The DC bus-bars are normally fed by:

a. DC generators only.
b. Transformer rectifier units.
c. Main aircraft batteries only.

246. The three stages of an AC generator are PMG, ...

a. exciter and main alternator.
b. exciter and GCU.
c. GCU and main alternator.

247. What is the standard output of an aircraft AC generator?

a. 3-phase, 400Hz, 115/200 VDC.
b. single phase, 400Hz, 115/200 VDC.
c. 3-phase, 400Hz, 115/200 VAC.

248. The APU generator:

a. only supplies electrical power when the aircraft is on the ground.
b. does not have a constant speed drive.
c. also supplies hydraulic power.

249. Emergency electrical power can be supplied by an air driven generator, ...

a. hydraulic motor generator, generator control unit.
b. integrated drive generator, main battery.
c. hydraulic motor generator, main battery.

250. The hydraulic motor generator (HMG):

a. supplies hydraulic power in case of an engine failure.
b. can only be re-stowed when the aircraft is on the ground.
c. provides electrical power when an engine generator fails.

251. The air driven generator:

a. can only be re-stowed when the aircraft is on the ground.
b. supplies electrical power when the aircraft is on the ground.
c. provides electrical power in normal flight.

252. The generator control unit (GCU) protects against....

a. over-voltage, under-frequency.
b. bus under-current, over-voltage.
c. under-current, over-frequency.

253. Differential protection (DP) protects....

a. when there is an open phase.
b. against under-current, over-frequency.
c. when there is a current decrease of more than 25 Amps.

254. The voltage regulation from the generator of an APU is controlled by....

a. the constant speed drive.
b. the speed control unit.
c. a generator control unit.

255. When electrical load shedding occurs, electrical power is....

a. available to the utility busses.
b. available to critical and essential equipment.
c. always available to the galley.

256. A static inverter transforms....

a. 115 V_{AC} to 28 V_{DC}.
b. 28 V_{DC} to 115 V_{AC}.
c. 28 V_{AC} to 28 V_{DC}.

257. A transformer transforms....

a. 28 V_{DC} to 115 V_{AC}.
b. 115 V_{AC} to 28 V_{AC}.
c. 28 V_{AC} to 28 V_{DC}.

258. A transformer rectifier unit (TRU) converts....

a. 28 V_{DC} into relatively smooth 115 V_{AC} power.
b. 115 V_{DC} into relatively smooth 28 V_{AC} power.
c. 115 V_{AC} into relatively smooth 28 V_{DC} power.

259. A circuit breaker:

a. may never be reset.
b. should be allowed to cool before resetting.
c. must be replaced after a circuit breaker trip.

260. When a circuit breaker trips:

a. the circuit breaker should be reset as soon as possible.
b. a technician must replace the circuit breaker.
c. a white collar is exposed.

261. A remote control circuit breaker:

a. allows the location in other places besides the cockpit.
b. must be reset as soon as possible.
c. must be replaced after a circuit breaker trip.

262. External electrical power

a. supplies the aircraft with 115 VAC/400 Hz.
b. can be applied in flight.
c. can be connected in the hangar with engines running.

263. The ground handling bus:

a. has an extra external power supply available to power all handling busses.
b. is powered on the ground by the APU or external power.
c. supplies the main AC busses.

264. The electrolyte in a NiCd battery is?

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

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

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

266. Which is the most efficient way of charging a battery?

a. Slow
b. Both slow and fast are equally efficient
c. Fast

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

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

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

a. The battery heats up.
b. The cell voltage drops.
c. CO2 is generated,

269. What product does the sump jar contain in the vent line of a lead-acid battery installation?

a. Distilled water.
b. Boric acid.
c. Bicarbonate of soda and water.

270. 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 voltage increases.
c. When the aircraft electrical load increases, the output current increases.

271. What is the purpose of a rectifier?

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

272. What determines the amount of induced voltage?

a. The diameter of the conductor.
b. The speed at which the conductor moves through the magnetic field.
c. The length of the field frame.

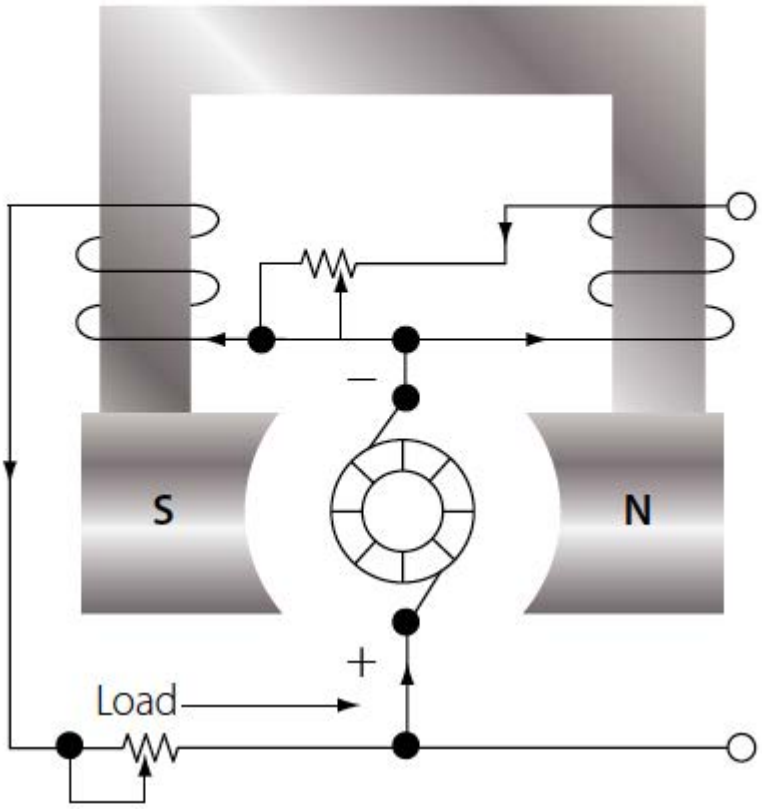
273. How do you call the component that completes the magnetic circuit between the poles in a DC generator?

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

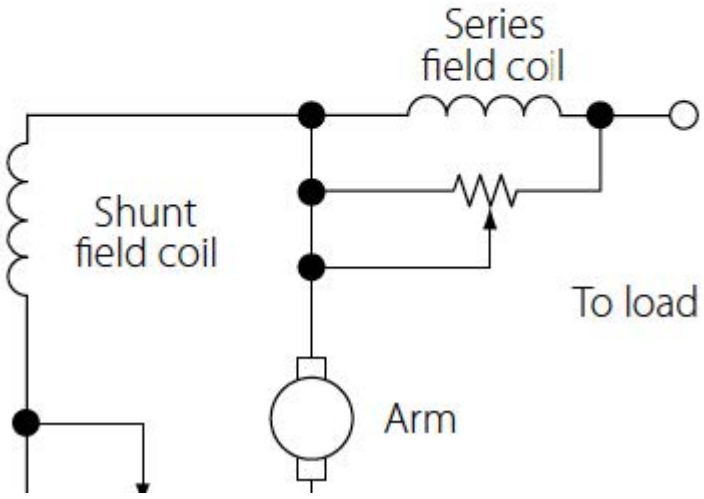
274. The output of a single coil generator is

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

275. What type of voltage regulator is shown in the figure below?



(A)



a. Compound wound generator.
b. Series wound generator.
c. Parallel wound generator.

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

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

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

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

278. What is the output speed of a constant speed drive?

a. 6000rpm
b. 12000rpm
c. Variable speed depending on engine speed.

279. 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.

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

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

281. In which type of unit can a permanent magnet generator (PMG) be found?

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

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

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

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

a. An electric motor powered by the RAT generator.
b. A hydraulic motor powered by a hydraulic pump driven by the RAT.
c. An electric motor powered by the battery.

284. What powers the hydraulic motor generator (HMG)?

a. Main hydraulic system.
b. RAT hydraulic pump.
c. Hydraulic hand pump.

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

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

286. The ram air turbine will supply....

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

287. What is the function of the flyweight governor (installed in the RAT)?

a. It controls the speed of the ram air turbine.
b. It controls the speed of the constant speed motor generator (CSM/G).
c. It controls the output voltage of the hydraulic motor generator (HMG).

288. How is voltage regulation achieved on DC generators?

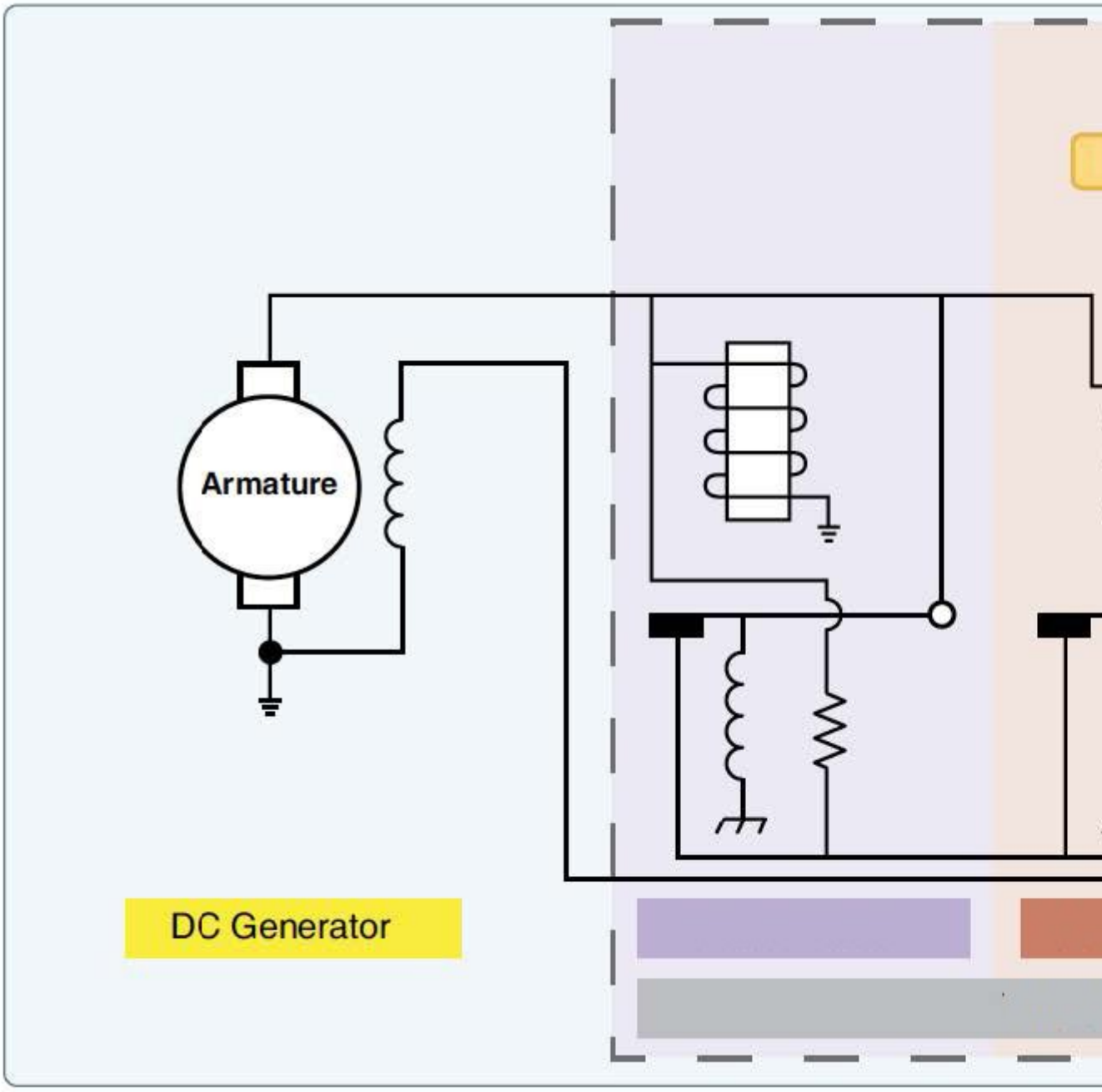
By changing the....

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

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

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

290. What type of voltage regulator is shown in the figure below?



a. Three-unit voltage regulator.
b. Carbon pile voltage regulator.
c. Reverse current delay.

291. In a parallel bus configuration the generators will:

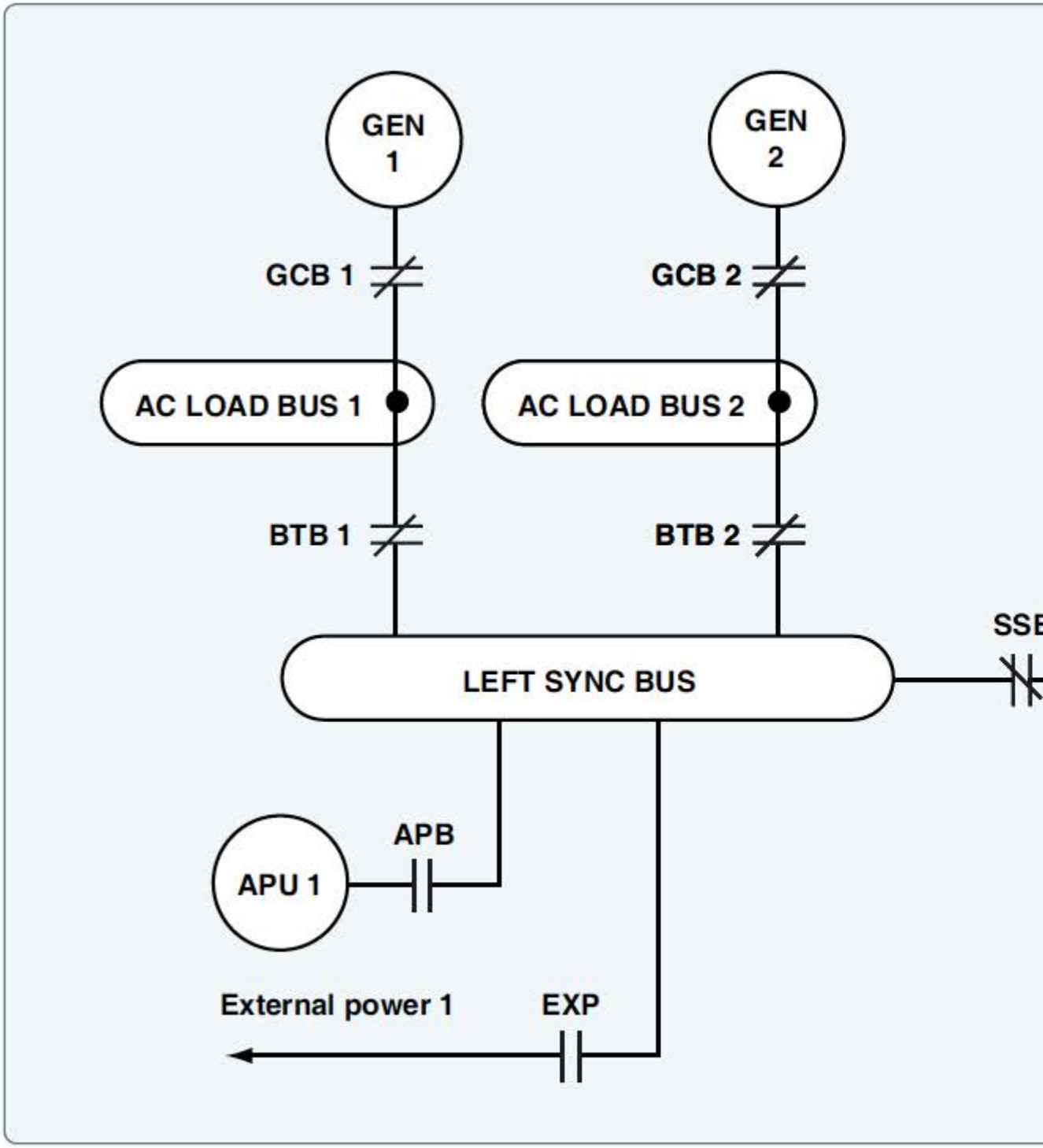
a. Each supply their own AC bus.
b. Divide the load, with the strongest generators taking the biggest load.

c. Share the load equally among them.

292. Emergency lighting is part of which service?

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

293. What type of bus is show in the figure below?



a. Split Parallel Bus
b. Parrallel bus
c. Mergency bus

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

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

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

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

296. Which formula represents the transformer ratio?

a. V2 / N2 = V1 / N1
b. V2 x V1 = N2 x N1
c. V2 / V1 = N2 / N1

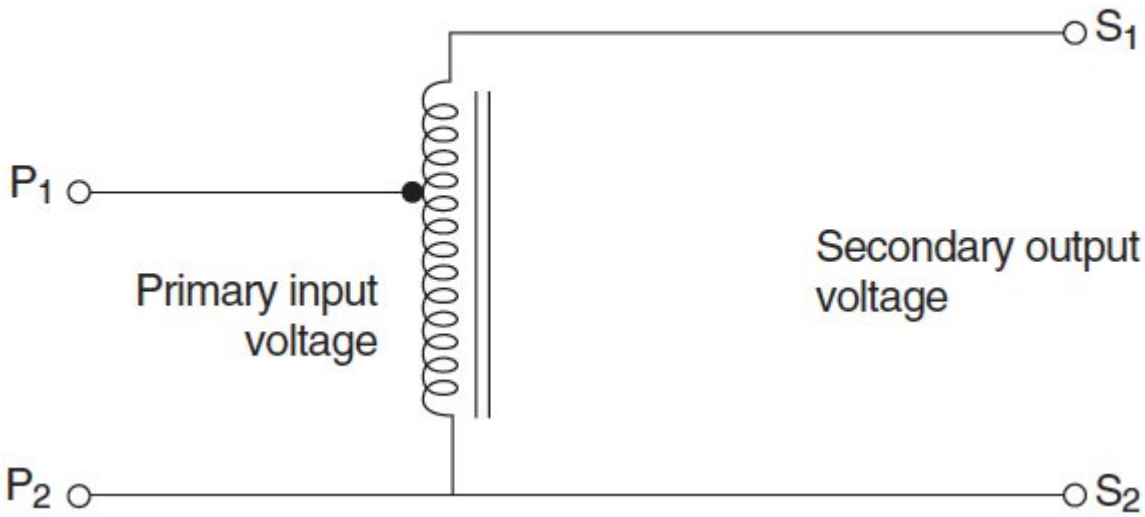
297. Transformer rectifiers are used for:

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

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

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

299. What type of transformer is shown in the figure below?



a. Autotransformer
b. Current transformer
c. Transformer rectifier.

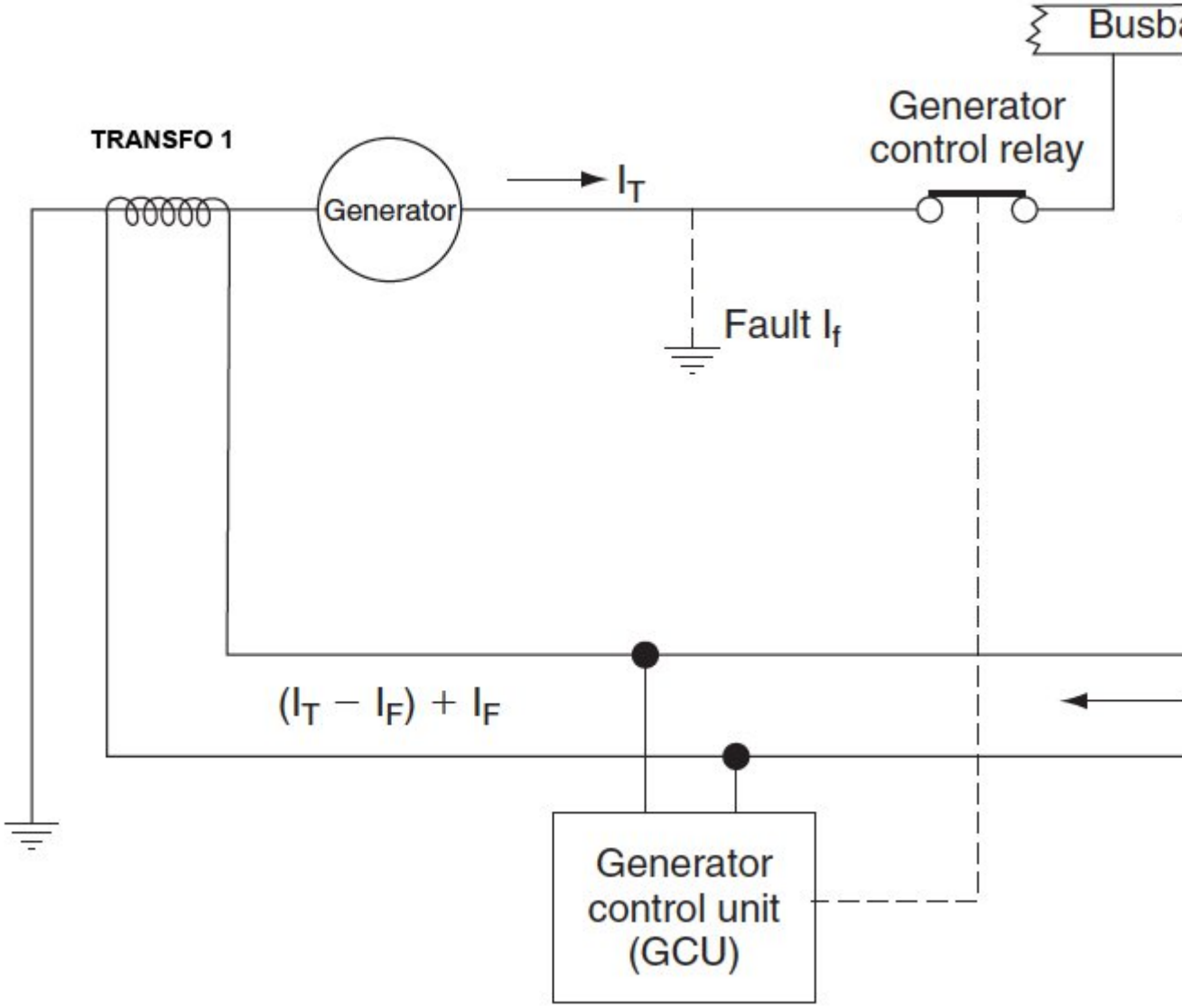
300. Which of the following circuit breakers CANNOT be reset while the fault exists?

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

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

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

302. In the differential protections circuit in the figure below, what type of transformers would be TRANSFO 1 and TRANSFO 2?



a. TRANSFO 1 is a current transformer, TRANSFO 2 is a voltage transformer
b. Both are current transformers
c. Both are voltage transformers

303. 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.

304. What is 'no breaks power transfer'?

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

305. When connecting external power, what prevents the application of reverse polarity to a DC powered aircraft?

a. A reverse polarity diode.
b. An irreversible external power connector (fool proof).
c. A reverse current switch.

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

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

307. 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. Discard the old cover. Use always plastic gloves and a mouth mask for bacterial protection.
c. 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.

308. On large aircraft (+44 seats), how is the maximum number of passengers certified?

a. It is set by the number of seats possible to install in the cabin respecting the international approved minimum seat pitch of 28".
b. It is the number of evacuated passengers (crew not included) during a simulated emergency evacuation.
c. It is the number of evacuated persons (crew and passengers) during a simulated emergency evacuation.

309. What do you understand by "emergency ropes"?

a. Big ropes, usually only accessible if the emergency exit is open, used to climb out of the aircraft.

b. Big ropes, which can be used by passengers, but only when the emergency slides do not inflate.
c. It is a bag full of fluorescent red plasticized rope strips (5m x 0,5m). They are used for composing a text on the ground, readable from rescue aircraft. (arctic and dessert overfly requirement)

310. What is the difference between an escape slide and an escape raft?

a. An escape slide that is also designed to be used as a boat, is called an escape raft.
b. Industry and manufacturers terminology. There is no difference.
c. An escape slide floating on the water, that remains pressurized for at least one hour is also called a raft.

311. On a main door, how is a slide mostly activated?

a. A girt or lanyard is attached to the floor when the slide is "armed" when the door is opened the girt (pulling) or lanyard will automatically activate the slide deploy and inflation cycle.
b. The Flight Attendant will activate the slide.
c. The pressure differential (outside versus cabin pressure) will automatically activate the slide when the door is opened.

312. 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.

313. Describe the picture and its use.

a. This is called the floor path lights. They will be illuminated by the crew during night flight to comfort of the passengers.
b. This is a fancy trim on the edge of the carpet. It looks nice on darker colours.
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.

314. Can a shovel be an mandatory safety equipment?

a. No.
b. Yes, only for arctic operation.
c. Yes, only for operation on dirt or gravel landing strips.

315. What kind of gas is used in the escape slide pressure cylinders?

a. 100% O_2, pure oxygen. (+/- 1800 psi)
b. Just compressed air. (+/- 3000 psi)
c. A gas mixture of CO_2 and nitrogen. (pressure depends on bottle size)

316. What type of gas is used in the inflation cylinder of a life vest?

a. Argon (Ar)
b. Carbon dioxide (CO_2)
c. Nitrogen (N)

317. How is a life vest inflated?

a. It will inflate automatically when the life vest is strapped around your waste.
b. By manually pulling the release mechanism, you will activate the inflation cylinder or by inflating it yourself via a mouth inflation valve.
c. It will inflate automatically from the moment you unfold the life vest out of his protective valise.

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

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

319. What is the "loose equipment layout"?

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

320. Why should maintenance staff never use the emergency torches stored on board of the aircraft?

a. When you take them out of the stowage an alarm chime will go off in the cockpit. This needs to be reset prior to next flight.
b. To avoid the time consuming reinstallation process. They have to be secured with copper safety wire 0,5mm and a safety number label.
c. To save the battery life time.

321. What subject does the FAR / EASA CS 25.853 covers on cabin upholstery materials?

a. This will tell which designers of fabrics have a part 21 approval and may deliver to the aviation industry.
b. This will regulate the way cabin interiors must be built to be conform with the new 15G force rules.
c. This will regulate the fire resistance capabilities and toxic gas producing limits for all upholstery materials used on an aircraft.

322. What do we understand by a "flight crew exit"?

a. Emergency exits build in the flight crew areas.
b. It has nothing to do with emergency systems. It is a term in the aviation industry to express that the captain has left the aircraft.
c. This kind of exits is only to be used by the pilots.

323. What are the specifications of a "flight crew exit"?

a. It must be an opening equipped with a rope or a slide.
b. An unobstructed exit of 50 x 50 cm. This may be a sliding window or a top hatch door.
c. An unobstructed opening of at least 50 square centimetre. This may be a window.

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

a. No. The seat is completely blocked in his its last position.
b. 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.
c. Yes, all the seat functions can always be operated manually.

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

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

326. How many belts are attached to the buckle on an attendant's seat?

a. 4,5 or 6
b. 3
c. 2

327. How can passengers seats (spacing or pitch) be adjusted on installation?

a. They are installed inside extrusion seat tracks with a 30-inch increment. This is the standard seat pitch requirement of ICAO. The seat itself can swivel 2 inch forward of aft on pivot points.
b. Seats are installed inside extrusion seat tracks with a 5-inch increment.
c. Seats are installed inside seat tracks with a 1-inch increment.

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

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

329. How are galleys installed in the cabin?

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

330. What kind of electrical equipment may we expect in a galley?

a. Coffee makers, water heaters, micro wave oven, ice makers.
b. Coffee makers, water heaters, fridge, ovens.
c. Coffee makers and water heaters.

331. 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 passenger configuration. This means that the aircraft has a mixed cabin lay out. (Ex. first/business/economy)
c. This is an aircraft with a mixed configuration. This means that cargo also is loaded on the main deck passenger zone.

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

a. 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.
b. You are independent of ground equipment.
c. You are independent of ground equipment, but the door can no longer be used as an emergency exit.

333. How are the cargo containers hold in place when loaded?

a. By special locks who will prevent movement.
b. By special locks who will prevent side movement.
c. They are locked to the cargo floor beams with straps and spanners.

334. What do we mean with the 'fire triangle'?

a. Is the presentation of water, carbondioxide (CO_2) and dry powder.
b. Has nothing to do with aviation but more a voodoo expression for aircraft which mysteriously disappear in close proximity of Bermuda.
c. It is a universal teaching representation where the 3 necessities to make a fire are represented in the legs of a triangle.

335. What are sufficient elements to make a fire triangle?

a. Nitrogen - gasoline - oxygen
b. Air - paper - 445°C engine bleed air
c. Air- kerosene - propane

336. If we are talking of a class A-B-C-D fire, what is the meaning?

a. Each letter represent the height of the flames following a X 10 factor, graduated in cm. (ex: a class A = a ground fire not higher then 10cm, class b = 100cm and so on)
b. Each letter represents how big the fire is. It is a code similar to storms and hurricanes. (Ex: class c = very dangerous with risk of many lives)
c. Each letter represent a fire caused by certain materials.

337. Which kind of fire category is more likely to take place in the electronic compartment?

a. Class A fire. (Fuelled by solid combustibles, in this case the insulation blankets).
b. Class C fire (Energized by electronic over current due to failing circuit breakers).
c. Class D fire. (Fuelled by combustible metals, in this case the copper wire that burns).

338. Where will a class D fire most likely take place, and what actions do we have to take?

a. These fire typically occur on the wheels and brakes. Only use water, other extinguishers don't work on burning metal.
b. These fires typically occur on the wheels and brakes. Never use water on burning metal, it will intensify the fire.
c. These fires typically occur on the wheels and brakes. Never use water on burning brakes. The thermal chock is so intense that the brake will meld to the axle and the gear must be scrapped.

339. What are the two main operating principle used for fire detecting probes?

Operating on sensing a difference in pressure,....

a. or passing a current limit coming from a bimetal.
b. or sensing a difference in light intensity. (infrared temperature measuring).

c. or sensing a difference between resistance.

340. How will the pilot be alerted in case of overheat or fire?

a. Overhead and Fire will trigger the blue flashing light on the pedestal.
b. Each have their proper lights coming on, on the overhead panel.
c. Usually the overheat will trigger amber warning lights, a fire warning will trigger red warning lights but also an aural alarm, mostly a ringing bell sound.

341. Which types of smoke detectors are mostly used in aviation?

a. The ionizing and the optical type.
b. The ionizing type and the infrared type.
c. The optical type and the O2 type.

342. What is the basic working principle of a overheat loop (change in resistance type)?

a. It consists of two wires, one inside the other, both separated by a special isolation material.
b. It consists of two tension stretched wires inside a tube.
c. It consists of two wires, one inside the other and separated by argon gas.

343. In which areas are fire extinguishers used on a passengers aircraft?

a. Engines, APU, cargo's, toilets, cabin, flight deck.
b. Engines, APU, cargo's, toilets, cabin, flight deck, electronic compartment.
c. Engines, APU, cargo's, toilets, electronic compartment.

344. On most modern aircraft, how would you describe the engine fire extinguisher bottle(s).

a. One spherical cylinders filled with dry powder.
b. Two or more spherical cylinders filled with halon gas.
c. Per engine, two or more spherical cylinders filled with dry powder.

345. How does a fire bottle installed near a toilet waste bin work?

a. It is a small cylinder with jet spray nozzle valve. When the smoke detector is triggered it will open the valve and the content will be sprayed into the waste bin.
b. It is a small cylinder with two outlet tubes. The end part of the tube is closed by a heat fusible tip. This will melt by the heat and the content will be released.
c. It is a small cylinder with a jet spray. A plastic stop is blown of when the pressure in the container raises due to the fire heat expansion.

346. How can we see that there has been a fire or overheat in a toilet waste bin?

a. By checking the interior of the bin for ashes and burned material.
b. By checking the temperature plate label above the waste bin. The yellow or orange indicator turns black at a set temperature.
c. The special paint of the door panel will colour completely black.

347. How is the APU extinguished in case of fire?

a. By an aluminium spherical cylinder filled with powder, installed near the apu.
b. By steel spherical cylinder filled with halon, installed near the apu.
c. By switching off the fuel pump.

348. What is a discharge cartridge?

a. It is a small unit containing a spring-loaded and solenoid. When the solenoid is activated it will release the pin. This will perforate the end stop of the bottle and the extinguishing gas starts to flow.
b. It is a small explosive unit that will perforate a membrane. Once open the extinguisher gas can flow.
c. It is a pressure membrane, that will explode at a calibrated temperature. When the cartridge is open the extinguisher gas can flow.

349. How do you test the fire bottles of the toilet waste bins?

a. When empty the bottle becomes black.
b. You check the pressure indicator on the bottle.
c. You need to weigh the bottle.

350. How do you test a single loop fire overheat system?

a. This can only be tested in a specialized component workshop.
b. You can only perform a flu test from the controller.
c. You press a test switch in the cockpit or on the controller.

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

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

352. What is the sniffer used for?

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

353. What type of smoke detector contains radioactive material?

a. Photo-electric smoke detectors.
b. Carbon monoxide detectors.
c. Ionizing smoke detectors.

354. In a pneumatic fire sensor, what triggers the fire warning?

a. The pressure increase caused by the release of gas from the absorption material acting on a pressure switch.
b. The temperature of the gas inside the steel tubing acting on a temperature switch.
c. The difference pressure between static air pressure and expended air pressure.

355. In a dual loop fire detection system. "Loop A" fire warning is shown, this means:

a. Loop A has detected a fire and loop B is faulty.
b. A fire test must be performed to determine the condition of the loops.
c. Loop a is faulty.

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

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

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

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

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

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

359. A systron-Donner fire detection system uses .....

a. helium gas.
b. air.
c. nitrogen gas.

360. How is avionics smoke detected?

a. By carbon monoxide detectors in the avionics bay.
b. By sampling the air extracted from the avionics compartment racks.
c. By smoke detectors in the avionics boxes.

361. On a "Pull-and-turn" fire switch, when is the fire bottle discharged?

a. By pulling the handle up, turning it to one side and pressing the discharge button.
b. By pulling the handle up.
c. By pulling the handle up and turning the handle to left or right.

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

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

363. What class of fire can be extinguished with water?

a. Class D
b. Class A
c. All fire classes.

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

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

365. What ensures that the agent (Halon 1211) is dispersed in the shortest time possible in a high rate discharge bottle?

a. Halon 1301 or Nitrogen.
b. Nitrogen.

c. Oxygen.

366. How can you determine if the lavatory fire bottle has been discharged?

a. By reading the pressure gauge on the bottle.
b. By weighing it.
c. By the temperature indicator strip.

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

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

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

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

369. Why is there a strainer installed in the fire bottle discharge valve?

a. To catch any fragment from the bottle.
b. To catch the yellow disk as an indication that the fire bottle is used.
c. To catch any fragment from the frangible disk.

370. During a fire bottle squib test, the green light illuminates. This indicates:

a. That the squib has fired.
b. That the squib and firing circuits are OK.
c. That the squib is good.

371. Pushing the fire test button does not test:

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

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

a. That the bottle has been fired.
b. That the fire bottle is due for inspection.

c. That the pressure in the fire bottle was to high.

373. Does the pressure in a fire bottle vary with the temperature?

a. Yes.
b. It has no influence on the pressure in a fire bottle.
c. Only when the temperature is lower than 10 degrees C.

374. How are fire bottles without a gauge checked?

a. By doing a tap test on the fire bottle.
b. No check has to be done as long as the bottle is not used.
c. By removing from the aircraft and placing on a weighing scale.

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

a. Water-type portable extinguishers can be used for every fire.
b. 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.
c. Water-type portable extinguishers are best for solid combustible fires (paper, fabrics, wood etc.). Never use them on electrical or flammable liquid fire.

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

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

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

377. What kind of data do we find on the labels of a portable fire extinguisher?

a. The manufacturer name and P/N & S/N. Approval date and instructions to use. Extinguisher type, weight details and last check or expire date. In the bottle usually the manufacturers date is engraved.
b. The manufacturer name. P/N & S/N. The colour will say the type (green=water, red=halon). The press indicator will show if the bottle is filled to level.
c. The manufacturer and approval date and instructions to use.

378. What is the main reason to install only halon-type portable fire extinguisher in the cockpit?

a. Because on fires in electronics you may only use halon.

b. Because halon fire-bottles can be made much smaller and lighter and so much easier to handle by the pilot from the seat.
c. Halon avoids smoke, keeping the cockpit 'visual'.

379. In flight controls, what do we mean with a "direct cable control system"?

a. a direct cable connection between the control column and the flight control computer.
b. a cable connection between the control column and the control surface.
c. a direct cable connection between the control column and the hydraulic control valve.

380. What logic would you expect from an hydraulic operated flight control system in an aircraft with a fly by wire concept.

a. Control column input - control valve - steel wire - hydraulic actuator - control surface.
b. Control column input - electrical wire - hydraulic actuator - control surface.
c. Control column input - steel wire - computer - electrical wire - hydraulic actuator - control surface.

381. Torque tubes are used on many places in flight control systems. How would you describe them and what kind of forces do they transmit?

Torque tubes are ....

a. full metal tubes used to transmit bending forces to the device being controlled.
b. hollow metal tubes used to transmit push-pull forces to the device being controlled.
c. hollow metal tubes used to transmit torsional force to the device being controlled.

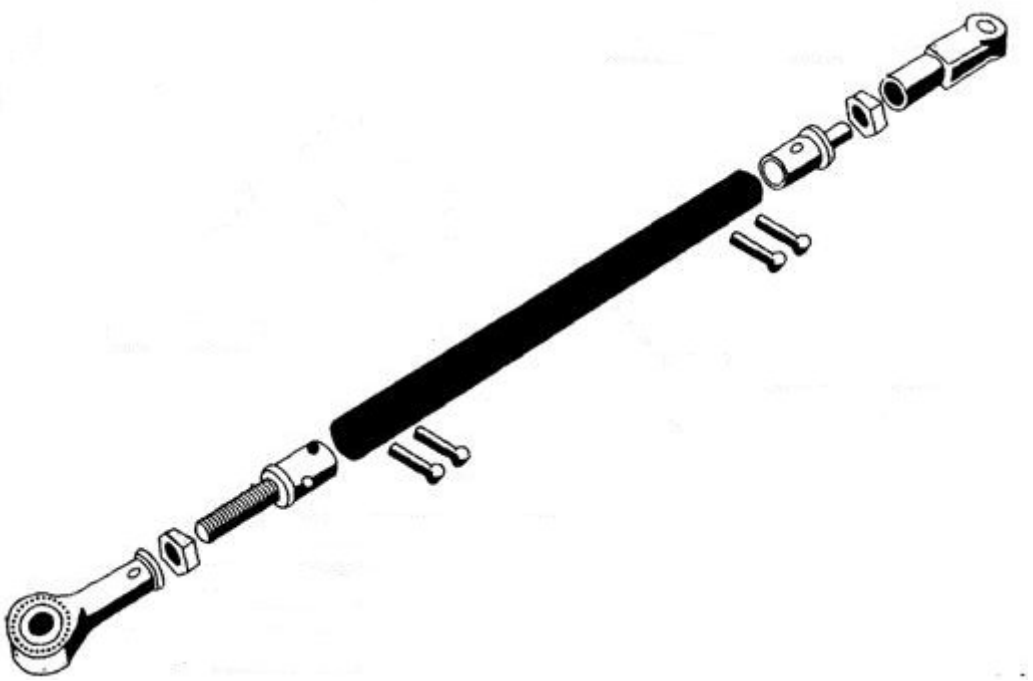
382. On large aircraft, what will influence the required force to move a primary flight control surface?

a. The control force required will decreases with the size of the control surface.
b. The control force required will increases with altitude.
c. The control force required will increases with the speed and with deflection angle.

383. How would you describe the term "hydraulic servo system" in a powered flying control system?

a. Is a system where a small input initiates a large power output, which is transmitted by a hydraulic piston-actuator to move for example a control surface.
b. Is a system where a small hydraulic input will transmitted a feedback signal.
c. Is a system used where a power chamber gives pressure in a line, but the pressure never flows directly into a return line. (Brake systems)

384. What kind of rod is installed in large aeroplane flight control systems?



a. push-pull rod.
b. tension rod.
c. compression rod.

385. On large aircraft what is the function of the flap?

a. They change the camber of the wing, this will require less thrust on low altitudes.
b. They increase the wing surface, this will provide additional slow down the aircraft.
c. They will increase the wing surface and camber and so create more lift.

386. Why is it so dangerous to have a flap asymmetry condition?

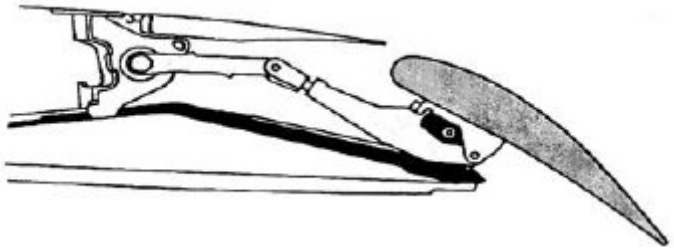
a. The flap asymmetry can create a wing roll effect out of range of aileron recovery possibilities.
b. The flap asymmetry induce a dangerously strong twist effect in the torque tubes.
c. A flap asymmetry causes so much drag on one side that the rudder is out of compensation range.

387. On most aircraft, what will be the required input signals to have an auto extension of the ground spoiler system?

a. On ground signal - wheel speed - min. one throttle in idle - ground speed within normal range.
b. On ground signal - wheel speed - all throttles in idle or reverse - speed within normal range.

c. Radio altitude less than 10 feet - all throttles in idle or reverse - speed within normal range.

388. What kind of flap configuration is used here?

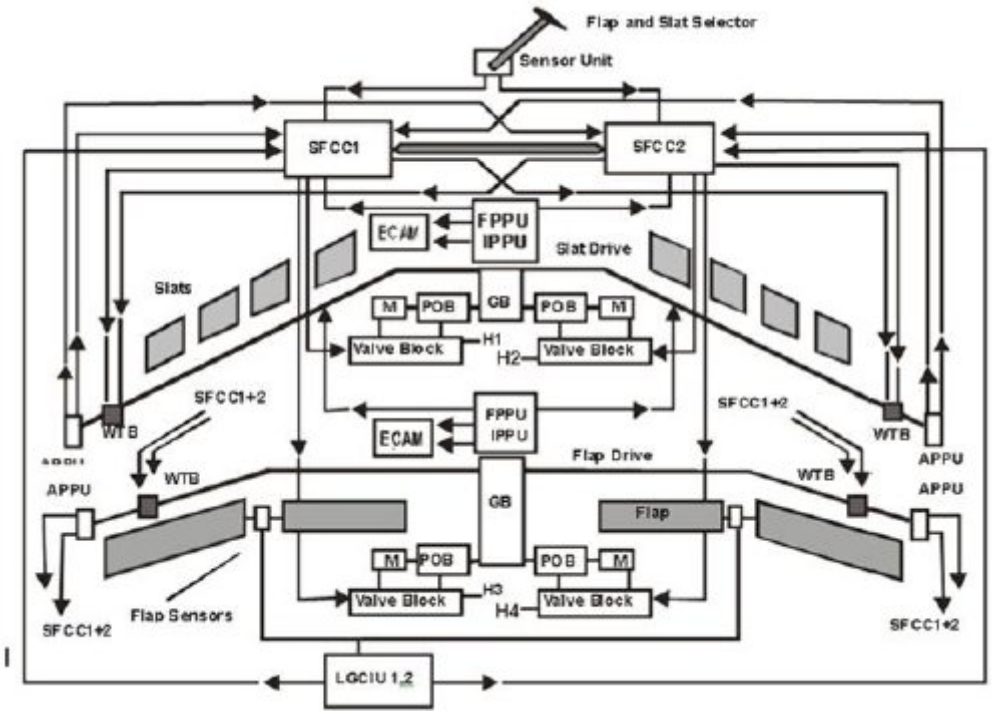


a. The hinged flap configuration.
b. Track and carriage configuration.
c. The fowler system.

389. What logic would you expect from an hydraulic operated flight control system on an aircraft which would not be considered fly by wire.

a. Control column input - steel cable - monitoring computer - hydraulic actuator - control surface.
b. Control column input - steel cable - hydraulic control valve - hydraulic actuator - control surface.
c. Control column input - electrical wire - command computer - hydraulic actuator - control surface.

390. How would you describe this type of control system?



a. A fly-by-wire system.
b. An auto-pilot control interface system.
c. A responsive loop control system.

391. Which control surface(s) are used in the active load system?

a. elevator and aileron and several spoilers.
b. only the rudder system.
c. flaps and slats.

392. By which control system is the active load control accomplished?

a. Electrical flight.
b. Pure mechanical flight.
c. By interruption by the pilot to activate the flight control system.

393. Why do we need to incorporate an artificial feel system in flight controls?

a. Moving a control with a servo system requires so less force input that the control may overreact by lack of feedback counterforce. We will create artificially a force feedback in relation to degrees of input and even related to speed.
b. Because technically you cannot join the two inputs, manual and auto pilot to one control if there is not an artificial feel system to connect to them.

c. The artificial feel in a servo mechanism is to allow to adjust the input force in relation of human force, this will keep the flying characteristics the same for every pilot. Smaller or female pilots have lesser muscle power.

394. Why are dampers installed on the flight control surfaces command systems?

Dampers will ....

a. prevent pressure shocks in the hydraulic system.
b. prevent flutter of the flight control surface.
c. limit the maximum deflection of the flight control surface.

395. Why do we have a yaw damper?

a. A rate gyro measures the rate of yaw, the yaw damper will give a correction signal to the rudder to avoid the yaw, this will avoid the dutch roll.
b. A yaw damper gives an extra stability (control stiffness) at the rudder during a roll. During a roll the centre of gravity of the large rudder panel shifts with an unwanted pitch down effect as result.
c. A yaw damper is needed to make an a coordinated turn. Without yaw damper the aircraft always makes a slip during a turn.

396. What is the main purpose of having a correct cable tension and rigging?

a. A cable must be tensioned as low as possible but still just enough to not jump out of the pulley grooves. A good rigging will give the control surface sufficient deflection in all required directions.
b. A correct cable tension will give the pilot a correct artificial feel during manoeuvres. A good rigging will give the control surface sufficient deflection in all required directions.
c. A correct cable tension will give the pilot a good responsive control at all temperatures. A good rigging will give the control surface sufficient deflection in all required directions.

397. What is the importance of temperature tables in cable rigging?

a. They will compensate for the difference in thermal expansion of the aluminium fuselage.
b. During rigging temperature is not relevant.
c. They will compensate for the thermal expansion of the cables, so an adequate tension is obtained to operate the system at all temperatures.

398. Which panel needs a balancing after a composite repair?

a. The inboard ground spoiler.
b. The elevator tab.
c. The outboard aft flap.

399. What is the purpose of a stick shaker?

a. It will advise the pilot that he is in an active stall. The control column shakes, the pilot should immediately increase the thrust.
b. It will warn the pilot by shaking the control column that is aircraft critically close to a stall.
c. It will warn the pilot that the auto slat system is activated.

400. If the control column shakes, what does it mean?

a. The aircraft is outside it's manoeuvring envelope.
b. Indication of flutter.
c. Indication that the aircraft is critically close to a stall.

401. What are the most common signals for "automatic ground spoiler extension"?

a. Ground/flight signal and wheel spinning signal.
b. Throttle lever angle signal and the aircrafts speed signal.
c. Both answers are correct.

402. In according the EASA Part 66, spoilers operating in roll mode are considered to be....

a. primary flight controls.
b. secondary flight controls.
c. speed brakes.

403. Where are the high speed ailerons installed?

a. Near the wing tip.
b. Mid wing position.
c. On the horizontal stabilizer?

404. The elevators control the movement of the aircraft on the .....

a. lateral axis.
b. longitudinal axis.
c. vertical axis.

405. The rudder controls the movement of the aircraft on the .....

a. lateral axis.
b. longitudinal axis.
c. vertical axis.

406. The aileron controls the movement of the aircraft on the .....

a. vertical axis.
b. longitudinal axis.
c. lateral axis.

407. Roll spoilers are used for ....

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

408. Ground spoilers are used for ....

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

409. On an aircraft fitted with an elevator trim tab, what position must the tab be set at if the aircraft has the tendency to nose down?

a. Neutral
b. Up
c. Down

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

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

411. 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.

412. Why is there an anti-balance tab installed?

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

c. The tab is moved to the same deflection as the flight control.

413. In what direction moves the trim tab in relation to the flight control?

a. Repositioned in the mid.
b. In the opposite direction of the flight control.
c. In the same direction as the flight control.

414. 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.

415. What is gust suppression?

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

416. What logic would you expect from an hydraulic operated flight control system in auto pilot function?

a. Flight control computer - electrical wire - control column - electrical wire - hydraulic actuator - control surface.
b. Flight control computer - electrical input - hydraulic actuator - control surface.
c. Flight control computer - electrical wire - hydraulic motor - steel cable - control surface.

417. What are slat track doors?

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

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

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

419. If a flap asymmetry is detected during flap extension, what will happen?

a. The crew are warned of the asymmetry condition and must stop the flap operation.
b. The asymmetry protection systems retracts the flaps immediately.
c. The asymmetry protection system stops the flap movement on both wings.

420. Explain the concepts 'mach trim'.

a. As an aerodynamic effect of high speed the aircraft has the tendency to create vortex vibrations on the elevators. By trimming the stabilizers and elevators in another position we reduce this effect and still maintain the altitude.
b. As an aerodynamic effect of high speed the aircraft has the tendency to pitch up. We have to correct this effect by pitch trim to keep a stable altitude.
c. As an aerodynamic effect of high speed the aircraft has the tendency to pitch down. We have to correct this effect by pitch trim to keep a stable altitude.

421. To reduce turbulence, what do the spoilers do in speed brake motion?

a. All the spoiler panels raise less high than when operated in ground spoilers mode.
b. The inboard spoiler panels remain flush with the wing.
c. The inboard spoiler panels raise less high than the outboards.

422. 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..

423. What is PFCU's manual reversion?

a. It allows the pilot to operate the flight controls manually if the powered flight control unit fails.
b. It is a system that allows the pilot to switch off the hydraulic system and fly the aircraft manually.
c. It gives the pilot feedback from the flight control surface.

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

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

425. 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.

426. In which system should be an artificial feel system provided to the pilot?

a. Power assisted control.
b. Power operated control.
c. Power cable control.

427. What kind of information needs the stall warning computer to calculate a stall?

a. Angle of attack, air speed, flap/slats position, gear position, stabilizer position.
b. Flap/slats position, gear position, stabilizer position, thrust settings.
c. Air speed, engine thrust setting.

428. What is Mach correction?

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

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

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

430. Dutch roll stability can be artificially increased by a ...

a. yaw damper.
b. roll damper.
c. pitch damper.

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

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

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

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

433. For the basic rigging procedure the flight control in the cockpit should set in .....

a. such a way that the rigging pin can be inserted.
b. neutral position and locked in this position.
c. any position.

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

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

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

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

436. A stall warning system will activate:

a. When the stall occurs.
b. Before the stall occurs.
c. After the stall occurs.

437. What is the main purpose of the fuel system on board of an aircraft?

a. Store the needed amount of fuel on board in the wing tanks and be able to deliver a constant amount of fuel under gravity and action to all the engines.
b. Store the needed amount of fuel on board in the tanks and be able to deliver a constant amount of fuel under pressure to all engines.
c. Store a quantity of fuel on board in the wing tanks and be able to deliver this fuel to the on-wing engine.

438. Some aircraft models use the weight of the fuel to change the center of gravity during flight. Where is that fuel usually stored?

a. In the trim tank of the horizontal stabilizer.
b. Fuel will be trimmed back to the centre tank. The CG is always more forward seen the wing sweep.
c. In a forward cargo and in an aft cargo auxiliary tank.

439. What is considered as the biggest contamination in fuel?

a. Water.
b. Loose paint particles from the inside of the tank.
c. Loose corrosion particles from the inside of the tank structure.

440. In general, how many fuel tanks are installed in an aeroplane?

a. Always two (each wing), or three (centre tank) for long haul flights.
b. Minimum as much at the number of main engines of the aircraft.
c. Always four, tow in each wing. Optional five, if the centre tank is used.

441. How should you consume the fuel on an aircraft equipped with a centre tank or auxiliary tank?

a. Always empty aux tank first, then the centre tank. Wing tanks are used the last.
b. Always empty the wing tanks first, then the aux tank. Centre tank the last.
c. It doesn't matter. Empty that tank first to bring the CG (centre of gravity) as such that you fly with minimum drag.

442. Where do we find usually sumps and drains in a fuel tank?

a. Sumps and drains are found on the lowest point of each fuel or vent tank.
b. Sumps and drains are found near the wing tip.
c. Sumps and drains are found on the lowest pint of the fuselage.

443. Large aircraft have dump valves. What is the purpose of these dump valves?

a. Structural protection in case of overpressure inside the tank. (overfill of thermal expansion)
b. To dump reserve fuel flight prior to a normal landing. This procedure is used to improve the braking efficiency.
c. To dump fuel in flight prior to an emergency landing. This will bring the aircraft weight below maximum landing weight. (structural protection).

444. What is the purpose of the vent tank?

a. This is a part of the wing that is necessary for creating lift but is so close to the tip that it is structurally not strong enough to hold fuel.
b. To ventilate the main tank before entering the tank for maintenance.
c. To prevent structural damage of the fuel tanks for over- and under-pressure.

445. How is the CG (centre of gravity point) determined?

a. The CG is given by the manufacturer upon delivery an stored in the memory of the FMC's (flight management computers). The FMC calculates constantly the actual CG depending on known fuel quantity on board.
b. The CG is given by the manufacturer upon delivery. The load and balance sheet will calculate the corrected CG upon loading of fuel, passengers, cargo.
c. The CG is constantly measured by two reference sensors in the wheel wells. Those are installed in the factory by original empty weight measurements.

446. As the fuel is used during flight, in what direction will the CG shift (centre of gravity point)?

a. If the cargo loading is done correctly and the passengers are seated evenly separated. The change of the CG is neglectable.
b. The CG will shift aft. This phenomenon increases with a higher wing sweep.
c. The CG will shift forward. This phenomenon increases with a higher wing sweep.

447. What is the location for an aircraft defueling?

a. From a pressure coupling on the defueling panel. (always on the RH wing. LH wing is the fueling station).
b. From the main refuel/defuel panel. It is the same coupling.
c. By the sump drains.

448. On a modern large aircraft how many fueling shut-off valves do we find?

a. One for each wing.
b. One.
c. One per fuel tank.

449. What happens when the high level sensor gets wet (during fueling)?

a. The level sensor will sense that this particular tank has reached his maximum level. The circuit will close the refuel valve of that tank.
b. The level sensor will sense that this tank has reached his maximum level. The circuit will close all the refuel valves.
c. The level sensor will sense that this particular tank has reached his maximum level. The circuit will open the cross-feed valve.

450. What do we understand with "pressure fueling"?

Pressure fueling is a kind of fueling....

a. where the pumps of the delivery truck, gives the pressure to pump the fuel via hoses tot the pressure coupling.
b. that must be done within 25 min. To meet the minimum turn-around time of 40 minutes. There is pressure to hurry up.
c. where the aircraft boost pumps assist the fuel truck pumps by suction pressure. This will speed up the flow.

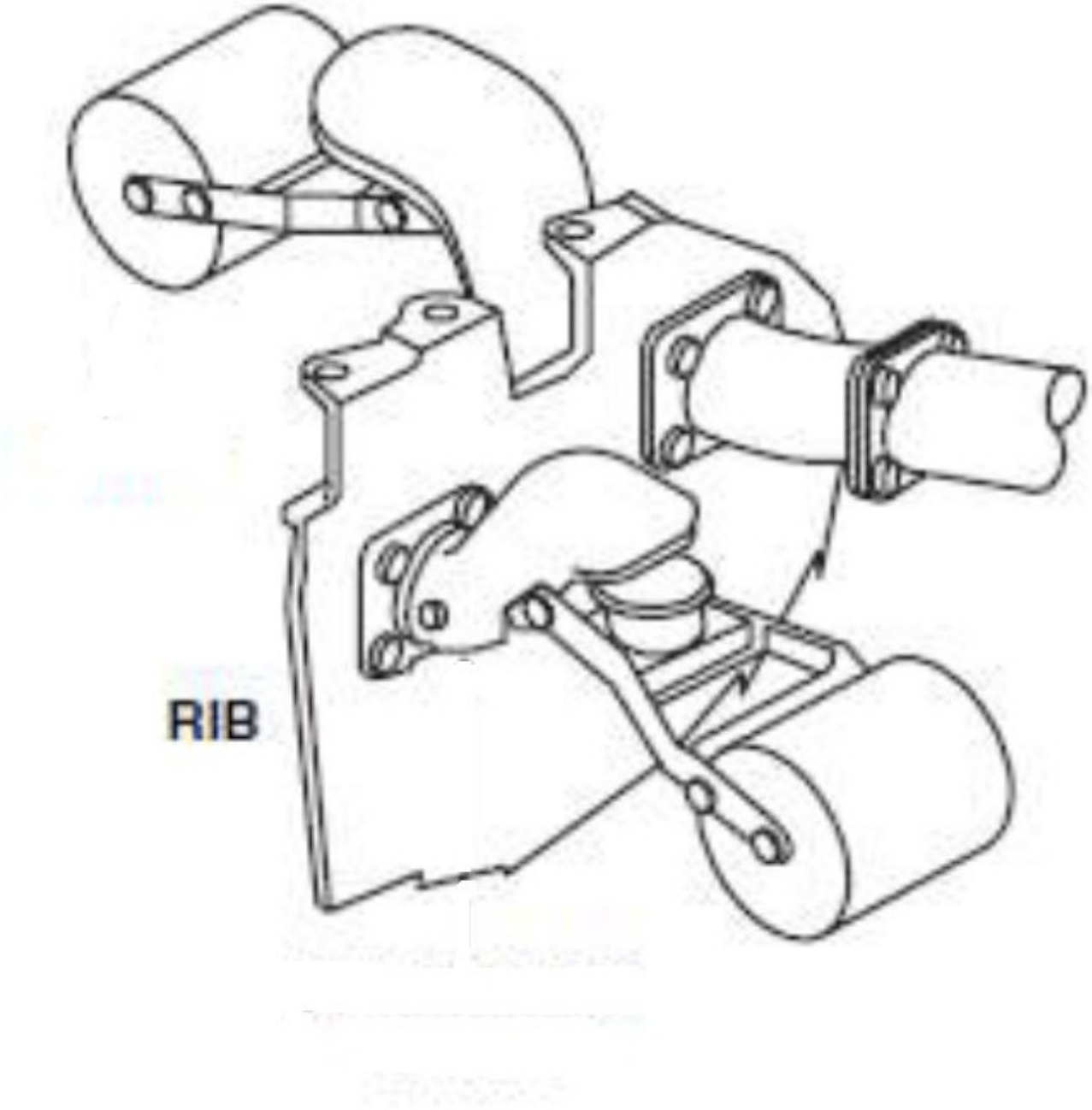
451. What type of pump is mostly used as fuel tank booster pump?

a. A centrifugal pump, DC electrically driven.
b. A centrifugal pump, three phase AC driven.
c. A piston pump, three phase AC driven.

452. What should be the flow capacity of a booster pump?

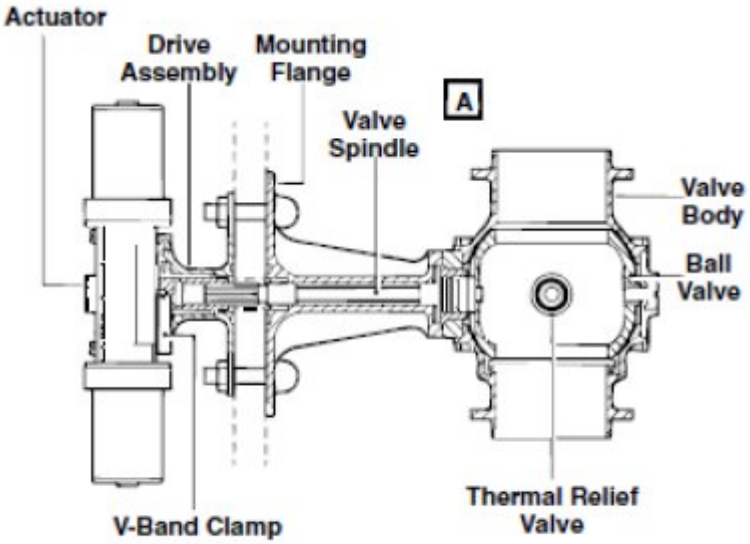
a. Each pump should be capable of supplying 50% fuel demand of all engines at cruise setting.
b. Each pump should be capable of supplying fuel for one or more engines with sufficient fuel during all the different phases of the flight.
c. Each pump should be capable of supplying 20% more fuel than max demand off his on wing side engine.

453. What is the purpose of a check valve at the outlet of the pressure pump?



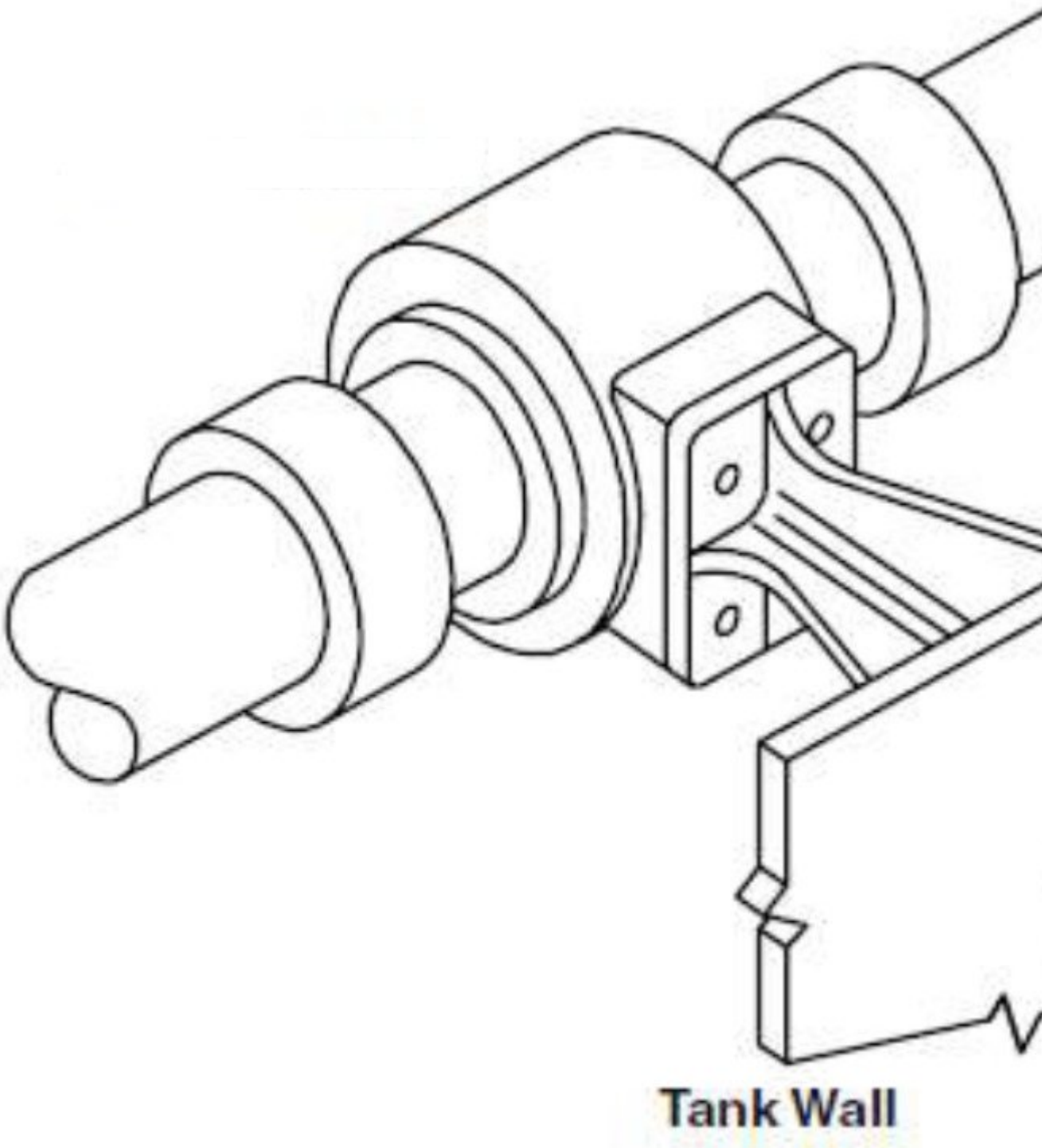
a. To prevent suction cavitation.
b. To prevent return flow from another pump.
c. To allow removal of the pump.

454. How would you call this valve?



a. The fire shut-off valve.
b. The anti-return valve.
c. The filling valve.

455. How would you call this valve?


Tank Wall

a. Tank interconnecting valve.
b. Cross feed valve.
c. Centre tank valve.

456. Why is venting so important?

a. It will prevent the accumulation of a fuel/air mixture, which could be explosive.
b. It will prevent structural damage of the fuel tank. It protect against over- and under-pressure.
c. It will prevent the accumulation of moisture (water) inside fuel tanks.

457. What is a function of the vent surge tank?

a. The vent tank will collect a fuel filling overflow of the main tanks.
b. The vent tank is used for continuous ventilation when the aircraft is in maintenance.
c. The vent tank is a high lift device.

458. Why is it important to drain the tanks regular?

a. A lot of condense water in the tanks can freeze. This can give problems on indication and engine fuel feed.
b. Fresh fuel contains 0,17% water (standard jet A fuel density 0,83). Too much water will give engine power problems and must be drained.
c. Corrosion! Water on metal gives corrosion.

459. What is the purpose of fuel dumping?

To be able to....

a. bring down the aircraft weight to zero fuel weight.
b. empty the tanks more than normal when the aircraft is planned for maintenance.
c. bring down the aircraft weight below maximum certified landing weight.

460. What would be a reason to install a fuel jettison system?

a. Any aircraft with a cruise range over 1500 nautical miles.
b. Usually large aircraft with 4 or more fuel tanks.
c. Usually large aircrafts, with a big difference between max take-off in relation to max landing weight.

461. What is the purpose of the cross-feed valve?

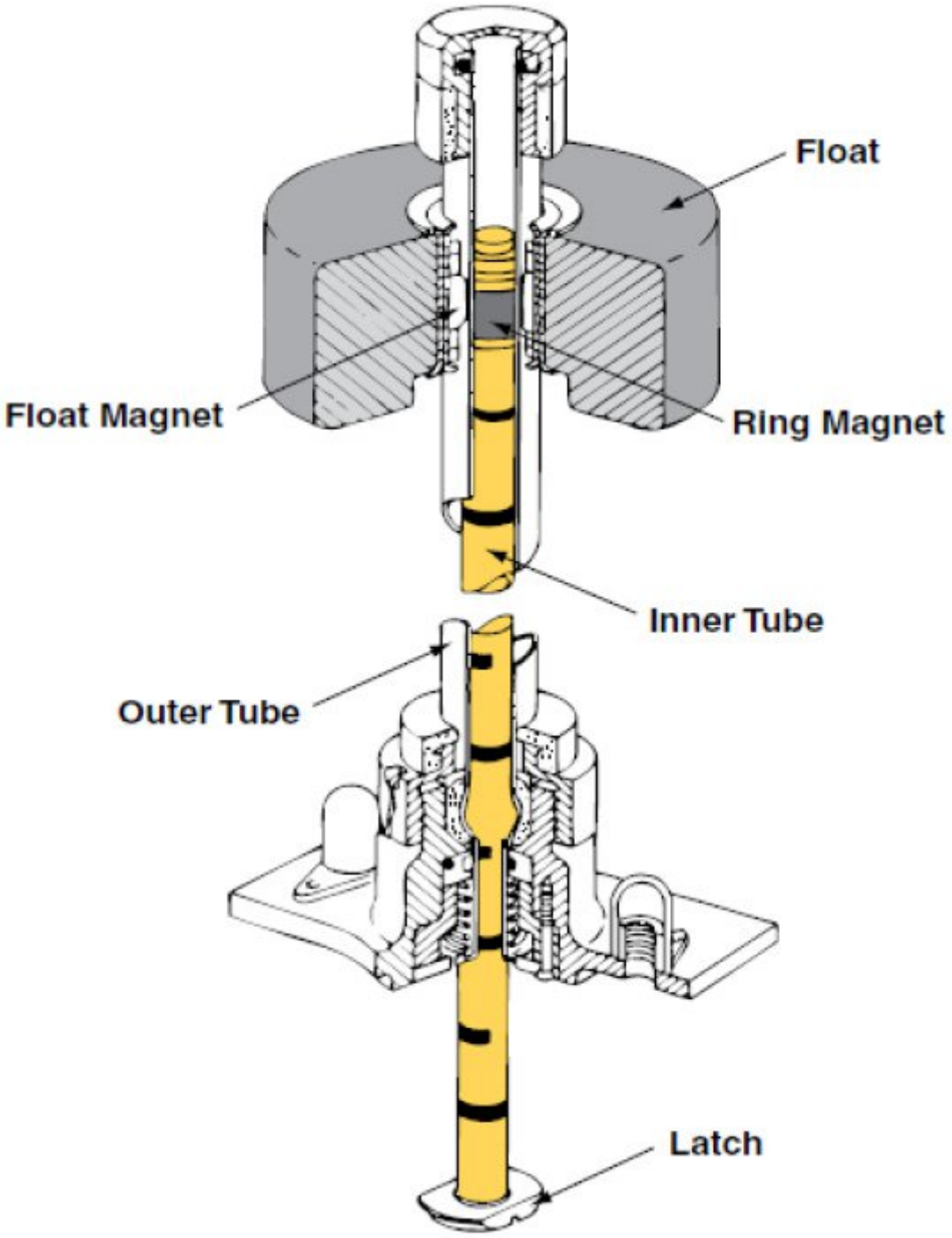
It allows....

a. the fueling of the opposite wing tank on aircraft equipped with only one fueling station.
b. the isolation of the fuel system in case of an engine fire.
c. the fuel boost pumps from one tank can feed the engines of the other wing.

462. What type of fuel quantity sensors are used inside the tank of modern aircraft?

a. Floating level probes.
b. Capacitor type fuel probes.
c. Infra-red probes.

463. What is this component found on the lower side of the wing?



a. A dipstick on the inner root of the wing, to measure the remaining fuel quantity in the wing.
b. A drain stick to drain water from the sumps.
c. A dipstick, to measure the fuel quantity in that particular wing.

464. Where is the trim tank located?

a. In the wing box.

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

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

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

466. Where would you find the component shown in the figure below?

a. On the wing leading edge.
b. Behind the engines on the lower wing surface.
c. On the lower wing surface.

467. 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.

468. What provides fuel tanks overflow for integral tanks?

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

469. When it is not possible to seal the fuel tank, then there will be ....

a. a bladder tank installed.
b. an integral tank installed.
c. a rigid tank installed.

470. Where is the flame arrestor normally installed?

a. Inboard tank.
b. Surge tank.
c. Outboard tank.

471. Which statement is true regarding jet pumps?

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

472. 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 in the fuel tanks.
c. Monitor the fuel pressure to each engine.

473. What are air release valves used for?

a. Allows air into the fuel feed line when the pumps are OFF.
b. Releases trapped air inside the engine fuel feed line.
c. Releases the air pressure inside the fuel tanks during refueling.

474. An aircraft is operating above 20000 ft. Why should the hydraulic reservoir be pressurized?

a. To prevent foaming.
b. To prevent expansion.
c. To prevent cooking of oil.

475. What is an indirect drain valve used for?

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

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

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

477. What is the purpose of fuel jettison?

a. To reduce the aircrafts landing weight.
b. To remove all the fuel from the tanks before an emergency landing, to reduce the fire risk.
c. To remove the fuel from the trim tanks quickly in case of a severe unbalance of the aircraft.

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

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

479. Engines receive fuel from, which fuel tank?

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

480. Why do aircraft have a fuel crossfeed system?

a. Only for ground refueling operations, to fuel the aircraft to both Left and Right tanks from 1 location.
b. To ensure that in all flight phases; the Engine Nr1 receives fuel from RH wing tank and that Engine Nr2 receives fuel from the LH wing tank.
c. To balance the fuel between the Left and Right tank.

481. What does a fuel density of 1.0 indicate?

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

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

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

483. How is the fuel quantity measured in the manual way?

a. The electrical resistance between two points.
b. With dipstick.
c. From the top of the wing visual.

484. What does the fuel quantity system probes measure?

a. The temperature of the fuel.
b. The weight of the fuel.
c. The quantity of liquid in the fuel tank.

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

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

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

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

487. Is it possible to refuel the aircraft if the refuel valve has an electrical failure?

a. Yes.
b. Only after replacing the valve.
c. No.

488. Where is also a fuel tank located on aircraft fitted with longitudinal balance fuel systems?

a. Centre wing box.
b. Stabilizer.
c. Wing tips.

489. 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.

490. Hydraulic power works on the basis of Pascal's law. How would you express this law?

A pressure that is exercised on a fluid in a container that is completely filled and closed off,....

a. will act in downward directions.
b. will act in side wards directions.
c. will act in all directions.

491. What are the consequences when there are air bubbles in hydraulic circuit?

a. Hydraulic fluid is nearly not compressible, while air is very compressible. The pumps can't pressurize anymore.
b. Hydraulic fluid is nearly not compressible, while air is very compressible. It makes the system loses efficiency.
c. It has not so much of impact on the operation of the system but it will make foam in the system and that degrades the oil much faster.

492. What means 3000 psi?

a. 3000 pounds per square inch.
b. 3000 pressure system indication.
c. 3000 particles per system inspected.

493. What are the most important hydraulic power consumers, on modern aircraft?

a. The flight control system and the engine reverser system.
b. The landing gear system and the flight control system.
c. The landing gear system and the cargo doors system.

494. In a engine driven hydraulic circuit, where will you find the fire shut-off valve?

a. In the return line towards the reservoir.
b. In the supply line from the reservoir to the engine driven pump.
c. In pressure line downstream of the engine driven pump.

495. Which requirements do we expect from the fluid used in an aircraft hydraulic system?

Low freezing point,....

a. anti-foam, fire resistant, odourless.
b. minimum change of viscosity with temperature, not aggressive on plastics, affordable.
c. minimum change of viscosity with temperature, fire resistant.

496. What is the most common used hydraulic fluid used in modern aircraft?

a. Skydrol
b. Hydrofluid
c. Lokoil avio

497. Name some basic functions of the hydraulic reservoir.

a. Provide continuous fluid of the pumps, allow fluid level variations, provide a system fluid reserve.
b. Provide continuous fluid for the pumps, provide fluid cooling.
c. Provide possibility to stop the fluid to the pumps in case of fire, allow fluid level variations, provide a system fluid reserve.

498. Which method can be used to pressurize a hydraulic reservoir?

a. A heating element.
b. Pneumatic pressure, coming from the pneumatic system (engines or APU).
c. Water column provides pushes on a press plate inside the reservoir. Zero maintenance system.

499. How would you describe an accumulator in hydraulic system?

a. An accumulator is a component where emergency energy is stored. It contains pressurized gas . It has to be refilled each time prior to flight.
b. An accumulator is a separate reservoir to store reserve or overfill fluid. This fluid will give some boost pressure in the system.
c. An accumulator is a component where you can store energy. In a hydraulic system it is mostly a cylinder with two chambers where one will store a pressurized gas.

500. What should you do first before servicing an accumulator?

a. System pressure must always be set before you can check or service a hydraulic accumulator.
b. Make sure the hydraulic system reservoir is full before you make a check or servicing of a hydraulic accumulator.
c. System pressure must always be removed before you can check or service a hydraulic accumulator.

501. Where are the main hydraulic pumps installed in an aircraft?

a. The main pumps are usually installed on the engine gear box.
b. The main hydraulic pumps are usually installed in the pylon and driven by bleed air from the pneumatic system.
c. The main pumps are usually installed in the wheel wells.

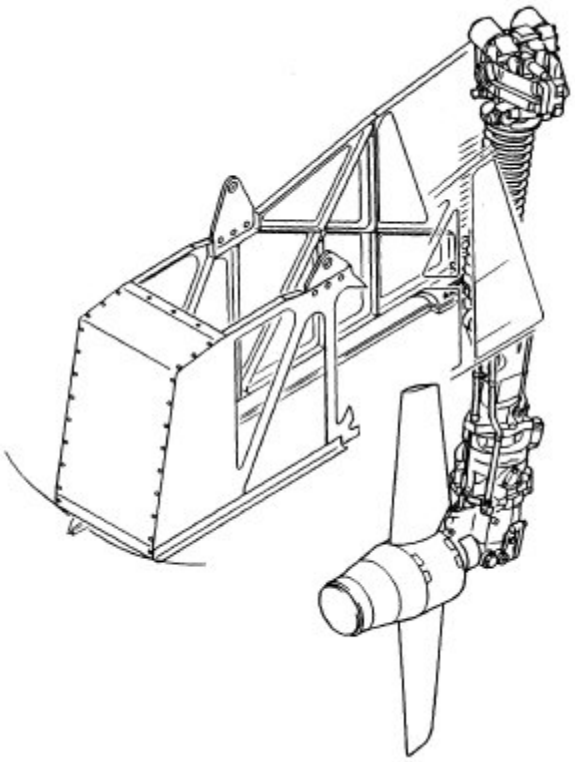
502. What kind of hydraulic pumps are normally fitted on the engine gearbox?

a. Centrifugal pump.
b. Variable displacement, constant pressure, multi piston type pumps.
c. Constant displacement, variable pressure, multi piston type pumps.

503. Explain the function of a PTU.

a. A Pressure Transport Unit will boost up the pressure to serve the tail flight controls.
b. A Power Transfer Unit. This unit will transfer hydraulic pressure from one system to another (separated) system without fluid transfer.
c. A Power Transfer Unit will transfer pressure to recover pressure between landing gear systems and flight control systems.

504. What is the name of this unit?



a. RAT, ram air turbine. When extended in emergency, the turbine can drive a generator and/or hydraulic pump.
b. RAT, rotary blade ejection jack. Will eject automatically as backup when the APU fails.
c. RAM, rotary air motor. Backup system for the pneumatic system.

505. Why do we need filters in a hydraulic system?

a. A filter is needed to protect the system from dirt and metal particles.
b. A filter is used mainly for inspections. It will tell us the degradation of the oil quality and when to change it.
c. A filter will keep dirt out of the system but the size of the opening in the wire gauze regulates mainly the flow inside the system.

506. What is a by-pass filter?

It is a filter....

a. unit with a relief valve that will open if the delta pressure over the filter exceeds a limit.
b. unit with a sensor that activates an alarm in the cockpit when the filter gets clogged.
c. type with internal small vortex-vanes.

507. How can you recognize a by-pass type filter?

a. You have to remove the filter bowl to see the difference.
b. They nearly always equipped with a pop-out indicator, or an electrical switch to activate a cockpit alarm.
c. Physically you can't see the difference. You have to consult the manual.

508. What is a pressure relief valve?

It is a unit that protects....

a. the complete system for overpressure. It will release the overpressure and drain it.
b. failure of other components due to over pressure. It will release the overpressure in that line section and dump it into the return line.
c. failure of other components due to over pressure. It will release the overpressure in that line section and redirect the pressure to the inlet of that unit or valve.

509. Why do we use priority valves?

a. If the pressure supply is higher than the demand, the pumps deliver an over-press, priority valves will dump this over-press back to the reservoir.
b. Priority valves makes sure that the pressure consumers are served in the correct priority. Slats, ailerons, elevators, rudder, flaps, gears. If there is a simultaneous demand the lesser system has to wait.
c. If the pressure demand is higher than the pumps can deliver, priority valves will first feed the most important system and lock out temporarilly the others.

510. How can the pilot observe the hydraulic reservoir quantity?

a. Look at the reading glass during a pre-flight inspection.
b. The reservoir has a floating devise connect with a transmitter. This will give a direct reading capability on the reservoir and send a signal to a cockpit instrument if power is on the aircraft.
c. The reservoir has a floating devise connected with a transmitter. This will give a direct reading capability on the reservoir and send a signal to a cockpit instrument even without power on the aircraft.

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

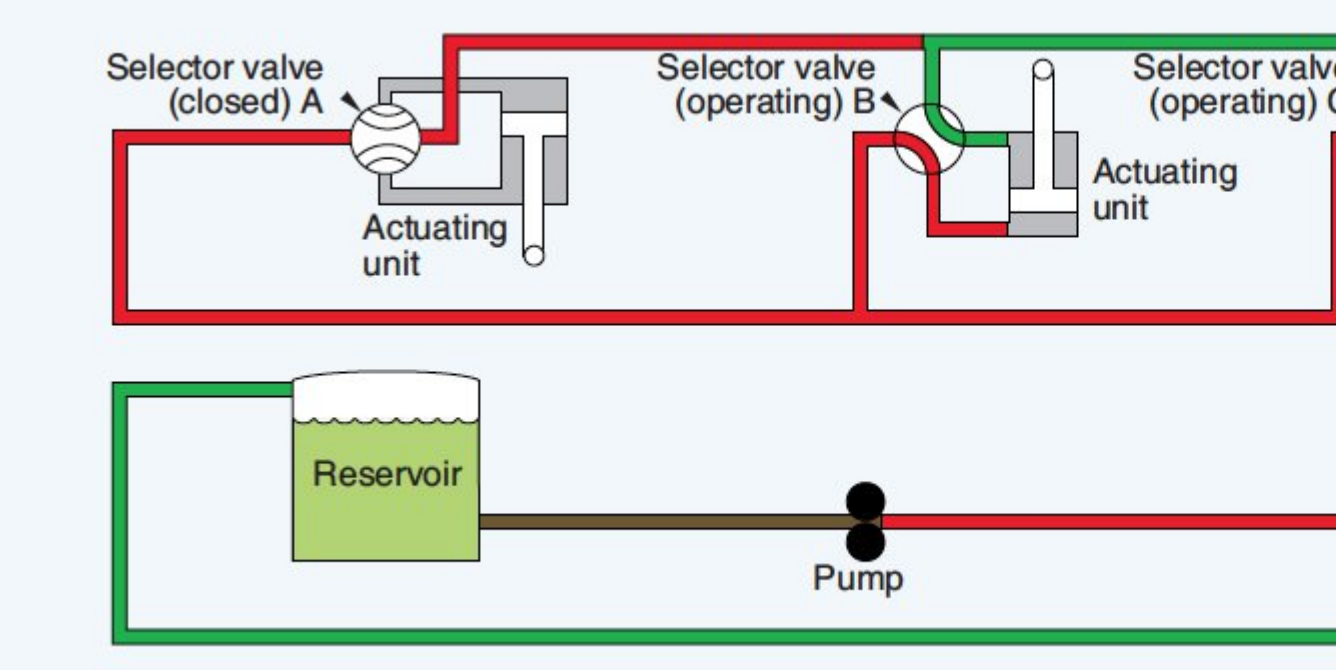
It is a....

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

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

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

513. Which type of hydraulic system is shown?



a. Open centre hydraulic system.
b. Closed centre hydraulic system.
c. Multi pump hydraulic system.

514. What defines a good hydraulic fluid?

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

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

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

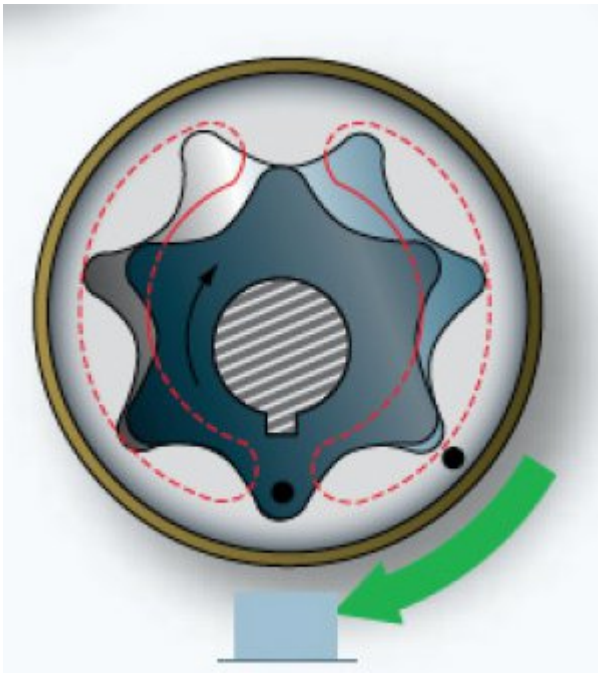
516. What is a function of a hydraulic accumulator?

a. To use hydraulic pressure to generate electrical power.
b. Store (pressurized) hydraulic fluid in case of a leak.
c. To absorb fluctuations in hydraulic pressure,

517. When does automatic deployment of the hydraulic ram air turbine occur?

a. Hydraulic system pressure at ZERO - Airspeed more than 200 knots.
b. Both engines OFF - Aircraft in the air - Airspeed more than 80 knots.
c. Both engines OFF - Aircraft in the air.

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



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

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

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

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

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

521. What is the function of a blockage indicator?

a. It shows that the filter is blocked.
b. It shows that the filter is bypassed.
c. It shows that the filters is installed incorrectly.

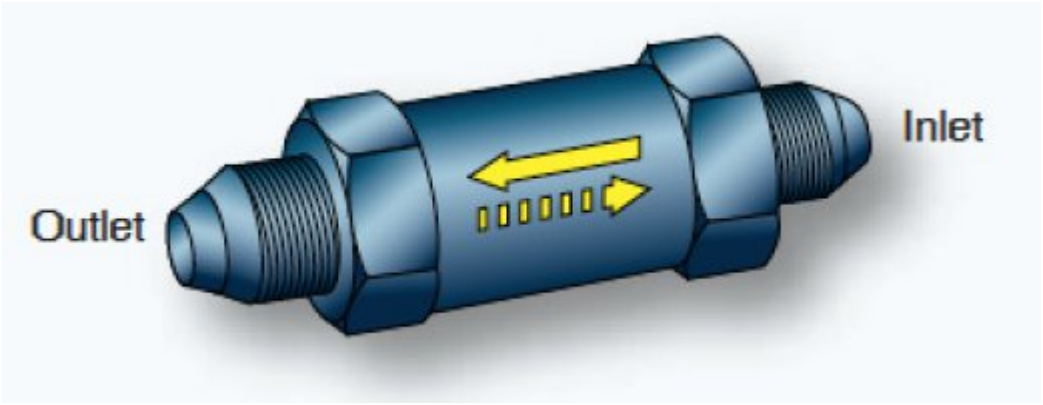
522. What monitors hydraulic pump pressure?

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

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

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

524. What does the dotted arrow (the arrow pointing to the right) mean in the figure?



a. The direction of free flow.
b. The direction of restricted flow.
c. The direction in which to install the valve (arrow pointing up).

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

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

526. Which filter is generally cleanable and reusable?

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

527. If a filter is installed after the hydraulic reservoir in the pump supply line, this is a .....

a. low pressure filter.
b. high pressure filter.
c. suction filter.

528. If a filter is installed after the pump in the pressure line, this is a ....

a. low pressure filter.
b. high pressure filter.
c. return filter.

529. What are the conditions for ice to be formed on a surface?

Ice will be formed....

a. from the moment that the algebraic sum of the air and the surface temperature is below freezing temperature.
b. when the air humidity in % × surface temperature is below 1,472°C *(Example: 65% humidity × 2 °C surface temp = 1,3°C is risk of icing)*.
c. on a surface when humid air encounters a surface and both air and surface are below freezing temperature.

530. What are super cooled water droplets?

a. These are water droplets near 0°C formed at a low atmospheric pressure. These droplets can grow double in size, physically impossible at sea level pressure.
b. These are water droplets in liquid form but below freezing temperature. On impact with a cold soaked surface, like the ground or an aircraft fuselage, they instantly form ice crystals.
c. These droplets formed by water with a very high Ph value (acid). These impurities make it very difficult to switch over the icing state.

531. On older aircraft, how can the pilot detect ice formation on his aircraft?

a. An experienced pilot will immediately feel in on how the aircraft reacts on steering inputs.
b. When his window becomes foggy.
c. Just by visual aids. Wing leading edge lights or an ice detector sticking out between the two front windows.

532. Explain the functioning of a thermal heated wing Leading Edge (LE) system.

a. The hollow wing LE is fitted with a thick walled copper duct. Inside this duct are electrical elements. When the system is on the heating energy will be radiated inside the LE cavity.
b. The hollow wing LE is fitted with a heated air duct. The forward face of this duct has a series of holes blowing hot air inside the LE cavity.
c. Via the wing LE anti-ice valve, hot air is blown inside the hollow wing LE cavity. The pressure regulating valve will maintain the press to 45psi which will keep the heat in the LE cavity.

533. Concerning engine anti-icing. Which statement is true?

a. Hot engine oil is used to heat the nose cowl leading edge.
b. Hot air from the engine compressor is used to heat the nose cowl leading-edge.
c. Hot fluid from the hydraulic system is used to heat the nose cowl leading-edge.

534. Why do the pitot probes need to be heated?

a. All protrusions on the fuselage will accumulate ice. A ice blocked pitot tube will register a too high airspeed which can lead to fatal accidents.
b. Protruding items in the forward section can accumulate ice. A with ice blocked pitot tube will register an incorrect angle of attack.
c. Protruding items in the nose area of the fuselage will accumulate ice. A with ice block pitot tube will register a too low airspeed.

535. How can the pilot monitor the good functioning of the pitot heating?

a. A current monitoring circuit will activate a warning light when there is no current flow through the heating element.
b. The pilot has no real indication. He can see that he selected the switch to on.
c. Since the pitot consumes a lot of energy, the pilot can see the jumpy increase on his ampere meter when the pitot heating is switched on.

536. In the water and waste system which heater will switch over to high power when the aircraft is in flight?

a. The heating gasket of the forward toilet servicing connection.
b. The ribbon heaters around the water feed lines from the water tank to the forward galley.

c. The water drain mast.

537. What is a de-icing mat?

a. Electrical heating elements embedded into the leading edge of engine intake.
b. A rubber boot on a leading edge through which intermittently pneumatic air is blown. Breaking of ice by using the flexibility of rubber.
c. Electrical elements around a duct inside the wing leading edge to warm up the duct air.

538. Which part of the aircraft would be described as a typical de-icing element?

a. De-icing boots used on the wing and stabilizer leading edge of a propeller aircraft.
b. De-icing boots used on a dorsal pin.
c. De-icing used on the engine inlet of business jets.

539. Except for functional test, which system should be used only on the ground?

a. Wing anti-icing system.
b. Thermal system.
c. Engine anti-ice system.

540. On an aircraft where is "rain repellent" used?

a. Only on the cockpit front windows.
b. On all the cockpit front and side windows.
c. A product to polish the cabin windows.

541. The can of the rain repellent system is....

a. pressurized.
b. un-pressurized.
c. an open line and spread out by air speed.

542. When should the rain repellent container be replaced?

a. When the pointer moves into the yellow band.
b. When the yellow float placard REFILL is visible.
c. Both answers are correct.

543. What precaution should be taken by using the chemical rain repellent?

a. It is only allowed to spray it on a dry windshield.

b. It is only allowed to spray it on a wet windshield.
c. It is to use only on the ground for better visibility.

544. Why does each pilot has his own wiper control switch?

a. So they can select each a different wiper speed for their own visibility comfort.
b. Since the windows each have another relative angle versus the airstream (and so rain) one side will always receive considerable more water then the other.
c. For system redundancy in case of failure.

545. Why are acrylic windows coated with wax?

a. This coating will let the rain makes bigger droplets and so blown away much easier by the airstream.
b. To give the window a shiny look. It also works as a sun reflector for the heat.
c. To protect the window for erosion.

546. Which spoilers on the wing will lift more, when the speed brake lever is engaged?

a. Inboard spoilers.
b. Outboard spoilers.
c. All spoilers on the wing lift symmetrical.

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

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

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

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

549. The operation of the serrated rotor ice detector is based on which principle?

a. Increased torque load on the electric drive motor when covered with ice.
b. Ultrasonic vibration of the ice sensing element.
c. Blockage of small moves resulting a change in ram air pressure on a diaphragm.

550. Engine anti-ice systems are powered by:

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

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

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

552. Which system prevents ice formation?

a. Defogging system.
b. De-icing system.
c. Anti-ice system.

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

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

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

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

555. Which system removes ice formation?

a. Defogging system.
b. De-icing system.
c. Anti-ice system.

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

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

557. Rain repellant is stored in:

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

558. Rain repellant is normally used:

a. In combination with windscreen wipers at high altitudes and light rain.
b. In combination with windscreen wipers at low airspeeds and heavy rain.
c. Instead of windscreen wipers at low altitudes and heavy rain.

559. Which of the following statements is true?

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

560. Air data probes are ....

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

561. To prevent overheating from the drain lines on ground ....

a. the circuit breakers must be pulled.
b. drain lines electrical connector should be disconnected.
c. drain lines should be covered with special protection covers.

562. How does a pneumatic rain removal system work?

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

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

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

564. Why must you always wet the windscreen before operating the wipers?

a. To prevent wear on the drive mechanism of the wipers.
b. To prevent damage to the windscreen.
c. To prevent unnecessary wear of the wiper blades.

565. What is the function of the tapered metering pin inside the shock absorber?

a. It must regulate a constant flow of oil from the lower chamber to the upper chamber during compression.
b. During gear compression the pin will gradually narrow the section, so the oil flowing from one chamber to another will become more difficult, making the damping harder.
c. The pin will gear retraction, the pin will be pulled away so the nitrogen and oil can change from chamber. Nitrogen on highest point.

566. What is the function of the rebound check valve inside the shock absorber?

a. It will open to full flow between two chambers, when the inner cylinder moves in the extend direction.
b. It gradually stop the flow between the two champers when the gear is coming near the fully compressed condition.
c. It will limit the flow between chambers more when the inner cylinder moves in the extend direction. .

567. When talking about landing gear, what do we mean with track?

a. Is the distance between the most aft wheel to the nose wheel.
b. Is the distance between the far right to far left wheel.
c. Is the route followed by the nose and main wheel performing the smallest turning circle.

568. When talking about landing gear, what do we mean with wheel base?

a. Is the distance between two wheels on the main gear.
b. Is the distance between the nose wheel axle and the center of the boogie of the main landing gear.
c. Is the average ground surface covered by all the wheels. (factor depending on number and size of wheels)

569. What will determine how many wheels are installed on an aircraft?

a. The maximum aircraft landing speed.
b. The number of wheels are limited by the size of the wheel wells.
c. Each wheel can carry a maximum load. The mass of the fully loaded aircraft / load factor of the wheel = minimum number of wheels needed.

570. When talking about landing gear, what do we mean with bogie tilt?

a. Is the angle the bogie will make in relation to the strut at touchdown.
b. Is the angle which the bogie will make in relation to the strut at take-off rotation.
c. Is the angle of the bogie related to the vertical landing gear strut so it will fit into the wheel well.

571. When talking about the nose landing gear, what do we mean with centring cams?

a. Is the typical steering centring system that steer the wheel straight forward when the pilot releases the steering wheel.
b. Is a double V cam that will, centre the inner cylinder to the outer cylinder at gear extension so the steering wheels are safely centred to enter the wheel well.
c. Is the name for the centre bolt that connects the upper and lower torsion link.

572. What happens when we set the landing gear lever in the "OFF" position?

a. This is a safety position for maintenance purposes.
b. All the landing gear retraction/extension components are set to return line.
c. It will inhibit the emergency extension.

573. Explain the functioning of an mechanical operated sequence valve in the landing gear retraction/extension system?

a. The valve has so many ports as sequences required in the system. When one movement is fulfilled, the momentarily over-press in the line will se the following port under pressure.
b. The correct positioning of one component will set the sequence valve so that the hydraulic flow is allowed to the next actuator to move.
c. The sequence valve will mechanically close his own sleeve from the pressure line when his function is terminated.

574. How will the gear extend in emergency?

a. By pulling on the gear emergency reset cable, the extension valve is connected to the standby hydraulic system. Once the valve is in position the standby pump is activated and gear extended.
b. From the cockpit a cable is pulled under tension. This will engage the door switch to open. When the door is open the gear is released.
c. By mechanical means the over-centre position of lock links or uplock hooks is disturbed out of position. This will free the gear, so it can fall down freely by gravity.

575. What does the indication of a red landing gear warning light mean?

a. The gear is still in transit and is not locked.
b. The gear is locked in upper position.
c. The gear is locked in down position.

576. Is it possible to see a green and a red gear indication light simultaneously?

a. No, this is under no condition possible.
b. Yes, gear lever selected down and gear is in down transmit but the unlock hook stayed blocked in his up position.
c. Yes, (for very short time) the gear is down and locked while the handle is selected up.

577. What can the pilot do when he has no indication at all for a particular gear?

a. He can consult the near/far condition of the proximity switch via the MCDU. (If option installed)
b. He can check the gear down and lock position via a viewer. (If option installed)
c. He can pull and set the indicator circuit breaker. This will always reset the system.

578. Why is a wheel made out of two halves?

a. They only use this technique because in overhaul shops the tire can be removed or installed by robots completely automated.
b. Because the tire bead wire is so rigid it is impossible to be rolled over the wheel rim edge during installation. (like a car tire is installed on the wheel)
c. One reason only, money. It is a lot cheaper to make two wheel halves, then a wheel of that size in one piece.

579. What is the purpose of the splines installed on the inner side of the wheel rim?

a. They make the connection between the wheel and the rotors of the brake unit.
b. They are reinforcements of the wheel rim.
c. They keep the heat shields in place.

580. Describe the function of a brake.

By friction the brakes transform....

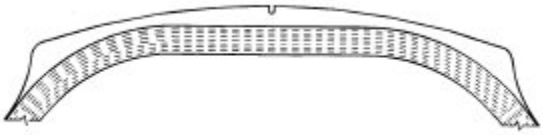
a. mechanical torsion force into heat.
b. dynamic energy into heat.
c. kinetic energy into heat.

581. What is the function of the anti-skid system?

It will prevent skidding of the wheels by....

a. releasing the brake pressure. When the wheel speed is less than 50% of the aircraft speed.
b. monitoring the rate of aircraft speed deceleration.
c. monitoring the rate of wheel speed deceleration.

582. How would you describe the used profile of an underinflated tire?



a. The outboard ribs on the tire are still present while the middle rib is used.
b. The centre rib and the ribs towards the centre of the aircraft are worn while the outboard profile of the tire still is reasonably good.
c. The middle rib is still present while the rest of the profile is used.

583. How would you describe the used profile of an over inflated tire?

a. The outboard side edge are extremely worn while the rest of the tire profile is ok.
b. The centre rib are used while the exterior ribs stays fairly good.
c. The exterior ribs are used while the centre rib is good.

584. How does the pilot usually steer the aircraft (at low speed) on ground? (commercial jets)

a. By moving the rudder pedals.
b. By alternate braking.
c. By mean of a steering wheel or tiller.

585. What power source will turn the steering wheels? (large commercial jets)

a. Hydraulic power.
b. Electrical power.
c. Pilot muscle power, transmission via cables.

586. What is "wheel track"?

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

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

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

588. What is the function of the two safety bars indicated in the figure?

a. They allow the landing gear to force open the door in case of a hydraulic failure.
b. They add strength to the door structure.
c. They stop the wheels from spinning after gear retraction.

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

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

590. How is a landing gear mechanical locked down?

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

591. When the landing gear selector lever is in the off position all hydraulic components are .....

a. connected with the pressure line.
b. connected with the return line.
c. connected with the sump line.

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

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

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

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

594. In which way can sequence valves in a landing gear system be operated?

a. Mechanical and hydraulic.
b. Electrical and mechanical.
c. Hydraulic and electrical.

595. What is a fusible plug?

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

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

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

597. Which type of wheel rim uses tubeless tyres?

a. Split hub.
b. Loose and detachable flange rim.
c. Well-based rim.

598. 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 on the rim.
c. Shows how much a tyre has moved compared to the inner tube.

599. Where would you find a chined tyre?

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

600. Which of the tyres shown would require immediate replacement?

a.

b.

c. 

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

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

602. 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.

603. In a non-hydraulic shimmy damper, what is used to dampen the vibrations?

a. A spring.
b. Compressed air.
c. A rubber piston.

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

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

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

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

606. On aircraft with bogie beams (trucks), what is used to detect air/ground?

a. Weight-on-wheel switched.
b. Squat switches.
c. Truck tilt switches.

607. Which external lights are always illuminated while the aircraft is in operation?

a. Navigation lights.
b. Landing lights.
c. Belly lights.

608. The green coloured navigation light is mounted on which location ?

a. Tail.
b. Top of the centre fuselage.
c. Right side wing tip.

609. When the anti-collision light is switched on by the pilot, on the ground.

What does this mean for the technician?

a. Anti-collision lights are always on, as long as electrical power is supplied to the aircraft.
b. The external power can be removed.
c. The engines will be started, it's a warning signal.

610. During a flight in the night, the cockpit instruments are illuminated by:

a. Instrument lighting, flood lights and spot lights.
b. Direct lighting
c. Only the primary flight instruments are illuminated, dark cockpit philosophy.

611. How is this type of illumination called ?

a. Instrument lighting
b. Spot lighting
c. Flood lighting

612. Why are luminescent floor strips installed in a passenger aircraft?

a. To indicate that luggage is not allowed to be placed in the aisle.
b. Flood lighting is used in the cabin for the visual comfort of passengers.
c. To guide passengers to exits in case of emergencies.

613. Which exit sign will indicate an exit on an aircraft?

a. 
b. 

c. 

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

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

615. Where will you find taxi lights?

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

616. Lights fitted with a dual filament are used as:

a. Landing light and taxi light.
b. Landing light and runway turn-off light.
c. Runway turn-off light and engine scan light.

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

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

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

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

619. Who controls the 'no smoking' and 'fasten seat belts ' lights?

a. Passenger.
b. Flight attendant.
c. Pilot.

620. 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.

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

a. Replace all emergency light bulbs.
b. Replace the battery pack.

c. Recharge the battery packs.

622. The external emergency lights are used for:

a. Illuminating the escape slides.
b. Illuminating the area around the aircraft to help rescue workers.
c. Identifying the entry doors to help rescue workers locate them.

623. Most modern aircraft have in the cockpit a diluter demand oxygen system. Explain this function.

a. Is a system that delivers an air mixture through the mask each time the pilot inhales.
b. Is a system that delivers 100% O_2 to the mask each time the pilot inhales.
c. Is a system that delivers an nitrogen mixture through the mask each time the pilot inhales.

624. How many oxygen equipments do we have on board of a modern airliner?

a. One or more bottles delivering oxygen to the cockpit and the cabin.
b. One O_2 bottle system for the cockpit, oxygen generators for the cabin.
c. One O_2 bottle system for the cockpit, oxygen generators for the cabin. Portable oxygen bottles for flight attendants in case of emergency.

625. Of what materials are oxygen cylinders made?

a. Aluminium - Steel - Composite
b. Aluminium - Copper - Composite
c. Aluminium - Steel - Copper

626. What will happen if, for any reason, the oxygen bottle pressure arise critically high?

a. A warning light will be set in the cockpit. The pilots should set their O2 masks in auto emergency flow mode until the pressure drops below critical value and the alarm the stops.
b. An over press-valve is installed on the head of the cylinder. The valve will open and discharge the overpressure overboard. The over press-valve closes again when the pressure is within limits.
c. A frangible disc will break at a set pressure. This will discharge the bottle to ambient.

627. Where are the passengers oxygen generators stored on a modern passenger aircraft?

a. In the E&E compartment.
b. Under the seat next to the life jacket.
c. In the ceiling or in the overhead bins just above the passenger or attendant seat.

628. How is an oxygen generator set to on?

a. By the flight areas from the cockpit.
b. By the flight attendants on their control station.
c. By pulling at the mask via a small cable you release a firing pin in the generator. This will start the chemical process for making O2.

629. When is the passenger oxygen generator activated?

a. The oxygen generator is deployed after activation of the portable oxygen cylinders by the flight crew.
b. When any mask is pulled down to face level, the activation pin is pulled out by the lanyard, releasing the firing pin.
c. The oxygen generators are activated by the crew when the masks are within passengers range.

630. How can you check that a passengers oxygen generator is empty?

a. By inspecting the firing pin position and checking if the heat sensitive tape became black.
b. By weighing the oxygen generator and compare the last weight data.
c. By inspecting the pressure indicator.

631. How and where is the oxygen pressure regulated?

a. The bottle pressure is delivered to the mask. Inside the mask there is a regulator that reduces the pressure to 40 psi each time the pilot inhales.
b. A medium pressure regulator to 500psi is installed on the oxygen bottle. A low pressure reducer to 40psi is installed in the mask.
c. A low pressure reducer regulates 1800psi bottle pressure to 50-75 psi pressure for delivering to the mask. The reducer is installed on or near the oxygen bottle.

632. How is the oxygen pressure from a cabin oxygen generator regulated?

a. Each oxygen generator has a pressure reducer installed on his exit. Pressure will be regulated to 40 psi.
b. There is a small 40 psi relief valve on the exit of the oxygen generator, that will discharge if oxygen production exceeds that pressure.
c. There is no regulation, the pressure is equal to the chemical burning in the generator.

633. Cabin chemical oxygen generators are located in?

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

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

634. Oxygen for the flight crew of commercial aircraft comes in which form?

a. Chemical oxygen generators.
b. Gaseous oxygen.
c. Liquid oxygen.

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

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

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

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

637. In which type of aircraft is liquid oxygen used?

a. Aircraft flying at very high altitudes.
b. Most large passenger aircraft.
c. Military aircraft.

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

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

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

640. Is it possible to regulate the amount of oxygen from a chemical oxygen generator?

a. Only the crew.
b. Yes.
c. No.

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

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

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

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

643. Where can you find a direct reading pressure gauge on an oxygen system?

a. On the oxygen system control panel.
b. On the flight deck.
c. On the oxygen bottle.

644. Which indication of a used chemical oxygen generator is provided?

a. The pressure indicator will be in the red zone.
b. A change of coulor of a band of thermal paint around the case.
c. No indication, only by weighing the oxygen generator the status can be determined.

645. What is a big advantage in using pneumatic power?

a. It is the cheapest technique of power transfer to build.
b. The transfer of energy has a better to power/weigh ratio then electrical or hydraulic power systems.

c. It is the cheapest technique to use. Generating hydraulic or electrical power cost extra fuel money while the engine is nearly a unlimited source pressurized hot air.

646. What are the biggest consumer of pneumatic air, during flight?

a. Air conditioning packs, anti-ice of wings and engines.
b. Air-conditioning packs, engine reverser actuators.
c. Air conditioning packs, engine starters.

647. When is pneumatic power used as a thermal or mechanical power source?

a. Pneumatic systems are used as a power source for aircraft systems with high thermal or mechanical power requirements.
b. Pneumatic systems are only used as an emergency power source.
c. Pneumatic systems are used as power source for aircraft systems with heating requirements only.

648. Which sources can provide pneumatic power to the aircraft in flight?

a. Engines - APU
b. Engines - Nitrogen reserve bottles
c. Engines - RAT (ram air turbine)

649. Which sources can provide pneumatic power to the pneumatic ducts?

a. Engines - APU - Air conditioning group.
b. Engines - APU - Pneumatic ground group. (Mobile or static)
c. Engines - RAT (Ram air turbine)

650. Can the APU deliver pneumatic power in flight?

a. No, an APU cannot deliver pneumatic power.
b. On most modern aircraft the APU can deliver pneumatic power but limited in flight altitude. (Below 20.000ft)
c. On most modern aircraft the APU can deliver pneumatic power up to cruising altitude.

651. Why is sometimes air taken from the low compressor stage and other times from the high stage compressor?

a. Because on each stage you may only take a limited amount of air.
b. Because there is such a great variation in air output availability between idle power and high power.
c. Because the mixture of both low and high stage gives the correct temperature.

652. When do we take air from the low compressor stage and when from the high stage compressor?

a. Low idle = high stage, high power = high stage.
b. Low idle = low stage, high power = high stage.
c. Low idle = high stage, high power = low stage.

653. How is the engine bleed air controlled in temperature?

a. Before the engine bleed air is delivers into the pneumatic system it passes a heat exchanger. In which the engine air heats the bleed air.
b. The engine bleed air is mixed with some cold fan air to obtain a steady temperature of the bleed air.
c. The engine bleed air is delivered to the pneumatic system passing through a heat exchanger. The regulated cold fan air flow over the exchanger will maintain a steady temperature of the bleed air.

654. How is the bleed air from an APU regulated?

a. The APU will change its speed to keep the outlet pressure to a constant 45 psi.
b. The APU bleed air-port is fitted with a pressure regulating valve. The pressure is regulated to 45psi.
c. The APU bleed air is tapped from the load compressor.

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

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

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

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

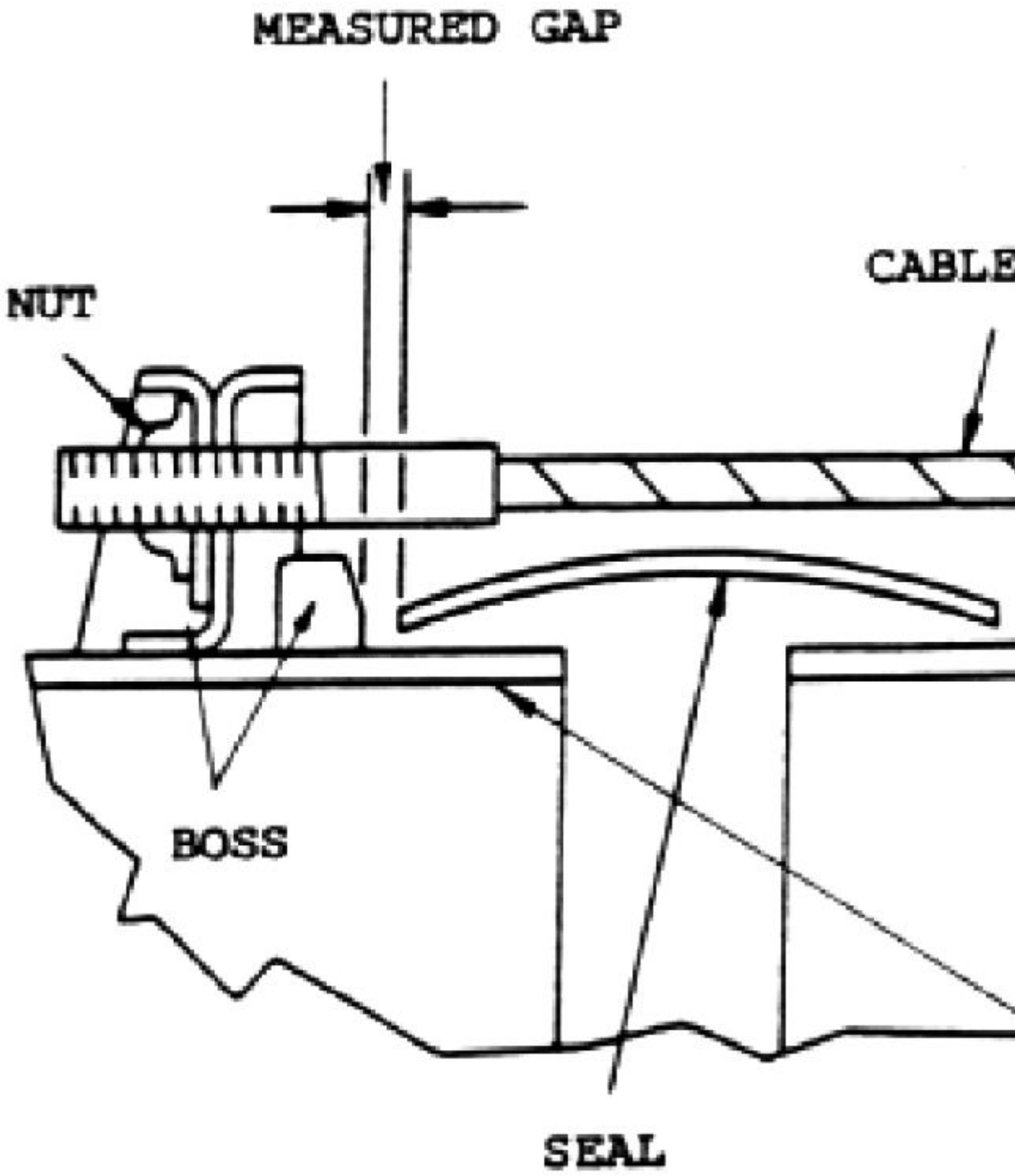
657. What is a low pressure pneumatic system used for?

a. Power the landing gear.
b. Power the gyro instruments.
c. Power the flaps.

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

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

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



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

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

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

661. Which systems are NOT used for duct leak detection?

a. Thermocouples.
b. Manifold failure loops.
c. Thermal switches.

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

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

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

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

664. Which probe is heated by hot bleed air?

a. Ice detection probe.
b. Angle of attack probe.
c. Total air temperature probe.

665. Where is the warm water in the toilets coming from?

a. It is tapped from the nearby galley. Each galley has a water boiler.
b. It's locally heated. Each toilet has a warm water heater.
c. From the hot water distribution tank.

666. How do you know that the potable water tank is fully serviced?

a. The needle on the instrument start to vibrate at the full sign.
b. You hear the difference of sound of the filing pump from the servicing truck. The pump makes a grumping noise since it cannot overcome the over-press build up.
c. By opening the fill valve you connect the overfill line with ambient. When the overfill spills out, the tank is full.

667. How do you drain the potable water system?

a. By opening all water taps and let the water flow to waste water, until water tanks are empty.
b. By opening the water tank drain valves.
c. You cannot drain the potable water system

668. Where is the waste water of the lavatory sinks draining to?

a. It will be drained to ambient via a heated drain mast.
b. It will be drained into the toilet system reservoir.
c. It will be drained to a 10 gallon tank below the sink, and drained during water and waste servicing.

669. How would you describe the water system on a modern passenger jetliner?

a. An open system with local water tanks installed in the ceiling close to the galleys and toilets. (The tanks are separated via siphon system, so only connected during the filling)
b. An open system with local water tanks installed in the ceiling close to the galleys and toilets. (The tanks can be connected)
c. A closed system with at least one water tank pressurized usually installed below under the cabin floor.

670. Why is the potable water tank pressurized?

a. Because the water taps are located at a higher level than the potable water tank.
b. Because the water tank is installed in an unpressurised zone.
c. Because with altitude the outside pressure would provide an unsteady water flow out of the water taps.

671. How is the potable water tank is pressurized?

a. Each tank is pressurized by the pneumatic system of the aircraft. Some aircraft models have a backup electrical compressor.
b. Each water tank has a small electrical compressor.
c. On ground the potable water tanks are pressurized by an electrical compressor. In flight the differential atmospheric pressure will provide the tank pressurization.

672. Explain the reason why the water distribution lines are protected.

a. Some sections need to be heated to obtain a stable temperature true through the distribution lines. This will ensure a good flow.

b. Only the first part of the distribution is electrically heated because the water tank is always installed outside the pressurized (cold) fuselage.
c. Because the distribution lines often run close to the exterior fuselage skin and can locally get frozen.

673. How would you describe a vacuum toilet system?

a. A vacuum pump will move the waste from the bowl into the tank just below.
b. A system where the waste is moved to a central waste tank via a vacuum pressurized water system.
c. A system where the waste is moved to a central tank by means of suction.

674. When is the vacuum blower working?

a. When you flush, while the aircraft is in ground.
b. When you flush, while the aircraft is on ground or below 16000 ft.
c. Always when you flush.

675. In a vacuum operated toilet system, where is the 'flush' water coming from?

a. From the potable water system.
b. Recup water from the waste tank below the bowl.
c. Each toilet has a small reservoir that will be filled during servicing.

676. 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.

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

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

678. An aircraft fitted with 2 potable water pumps will use the pumps as follows:

a. One pump services the forward cabin, the other the aft cabin.
b. One pump is active, the other standby.
c. Both pumps work together.

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

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

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

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

681. Which of the following statements is true:

a. Fumes from toilet waste tanks do not affect the structure .
b. Composite materials are used to reduce the chance of corrosion damage.
c. Toilet waste does not pose a danger to the aircraft structure.

682. An on-board maintenance system is used....

a. to confirm faults in several aircraft systems
b. to repair the airframe on the ground
c. to repair an engine anomaly in flight

683. The most important system were build-in test data is stored is:

a. central maintenance computer system
b. engine indicating and crew alerting system
c. the flight data recorder system

684. A build-in test which do not disturb system operation is called:

a. specific test
b. system test
c. cyclic test

685. The validity of data, loaded into an aircraft can be checked by:

a. the command display unit (CDU)
b. the primary flight display (PFD)
c. the navigation display (ND)

686. The data loading system is used for....

a. data loading only.
b. data down loading only.
c. data loading and downloading.

687. Navigation database loaded into an aircraft contains of....

a. airports, waypoints, runways, marker beacons and country name.
b. airports, waypoints, holding patters and structural monitoring.
c. airports, waypoints, country names and engine performance data..

688. The validity of the current data loaded into an aircraft can be checked....

a. on the data loader.
b. by using the FMS MCDU.
c. only before loading.

689. Engine health monitoring on modern aircraft is achieved by:

a. the cockpit EICAS display
b. the flight management computer
c. the low cycle fatique counter (LCFC) or engine monitoring recorder

690. A typical parameter which is monitored by a health and usage monitoring system is:

a. static air temperature
b. airspeed
c. aircraft stress of fatique

691. Structural monitoring of the airframe is achieved by:

a. the flight control computer
b. strain gauges on the airframe
c. a yearly inspection for skin deformation

692. Which bite test is initiated by the engineer?

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

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

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

694. In a 3-channel system, what happens if the command channels fail?

a. The complete system shut-down.
b. The monitor channel takes over.
c. The stand-by channel takeover.

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

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

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

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

697. Aircraft fault history can be read and copied from?

a. The Navigation System Database.
b. The Central Maintenance Computer.
c. The Communication System Recorder.

698. The system which can display aircraft maintenance manuals and technical log is called:

a. flight bag system
b. central maintenance computer
c. crew alerting system

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

a. Arinc 429
b. Bidirectional gate link

c. Mono-directional Ethernet link

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

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

701. Who can use the flight deck printer?
(1) Pilots; (2) Ground engineers; (3) Cabin crew

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

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

a. Vibration
b. Thrust
c. Load

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

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

704. During hard landing, what determines the degree of how hard the landing was?

a. How much "Gs" were encountered.
b. The weight of the aircraft.
c. The aircraft speed on touch down.

705. Engine data is routed for display to the flight deck by:

a. a RJ45 8 pins connector.
b. a crew wifi lan module.
c. AFDX cables and routers.

706. A typical IMA function is to generate a synoptic system page. This means:

a. automatic system control

b. auto brightness control in the cockpit
c. a system display in block diagram format

707. The arinc 653 specifications are developed for:

a. The IMA operating system
b. only for maintenance purposes
c. The IMA data communication

708. A core processing module consist of:

a. different processing submodules
b. only one router
c. one router and a maximum of 24 AFDX cables

709. The arinc 664 specifications are developed for:

a. data communication
b. a maintenance wifi connection
c. non-critical flight data only

710. Avionics full duplex (AFDX) cable can be recognized by:

a. 4 connector pins
b. 16 connector pins
c. 8 connector pins

711. A router is:

a. an aisle inside the aircraft cabin
b. a cable consisting of more than 3 AFDX cables
c. a connecting point for AFDX cables inside a network

712. The function of a network remote switch is:

a. To load the software into the processing resource cabinet.
b. To switch the network power on-off.
c. To change network data into another format.

713. Functions integrated in IMA are:

a. Only for electrical powered systems.

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

714. In an aircraft which has Integrated Modular Avionics.

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

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

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

716. Functions integrated in IMA (Integrated Modular Avionics) are?

a. Functions related to the cockpit displays
b. Only flight control functions.
c. Basically all aircraft systems.

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

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

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

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

719. Software which is used in IMA comply with:

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

720. Three major elements of the common core system are:

a. Computing Resource Cabinet, RJ45 connector network, remote data concentrators.
b. Computing Resource Cabinet, Arinc 429 Network, Remote Data concentrators.
c. Computing Resource Cabinet Arinc 664 network, Remote data concentrators.

721. Airborne electrical AFDX cables are connected with:

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

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

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

723. The purpose of an AFDX switch is:

a. To interconnect different modules or devices.
b. To switch the system power on-off
c. To have redundancy when the main switch fails.

724. A computer internet protocol (IP) address consists of:

a. 4 Bits
b. 1 Bit
c. 32 Bits (4Byte)

725. In most transport aircraft, the cabin systems can be managed from:

a. the cabin attendant panel
b. the cockpit
c. the passengers seats

726. A passenger control unit is installed:

a. in the aircraft cockpit
b. below the cabin attendant panel
c. on the passenger seat

727. In modern aircraft, the passenger manifest (list with all passenger names) can be found?

a. only on the ground at the airport of departure
b. loaded in the cabin network server
c. on a paper list in the cockpit

728. The retractable video display units are operated by:

a. the flight attendant control panel
b. the cockpit crew via the display management control panel
c. the passenger control unit

729. The cabin monitoring system consist of:

a. main multiplexer and seat electronics box
b. cockpit door surveillance system and cabin video monitoring system
c. inflight entertainment system and cabin video monitoring system

730. The cockpit door surveillance system is used by:

a. the cockpit crew
b. the cabin crew
c. only the business class passengers

731. The purpose of the cabin video monitoring system is:

a. to monitoring the galley area's and to verify that cabin attendants and (or) passengers are not smoking.
b. to monitoring the right use of the passenger control unit
c. to detect unruly passengers and potential threats

732. Which of the following functions is also an emergency functionality?

a. Pre-recorded announcements.
b. Passenger Address
c. Passenger Call System

733. In modern aircraft, the cabin systems can be managed from?

a. Each Passenger Control Unit
b. The P5 panel in the Cockpit
c. The Cabin Attendant Panel

734. The cabin interphone system is used for communication between....

a. cabin crew and passengers.
b. passengers and flight crew.
c. cabin crew and flight crew.

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

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

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

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

737. What is the purpose of the cabin network server?

a. To connect the passenger control unit to the cabin interphone system.
b. To give access to pre-departure and departure ports.
c. To connect the passenger service module to the HF communication radio.

738. Where is a passenger control unit used for?

a. Communication between passengers and flight crew.
b. Control the area lighting.
c. Selecting audio channels and reading lights.

739. What is a master call module?

a. A part of the VHF communication radio system.
b. A light sign for the emergency exits.
c. A part of the cabin interphone system.

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

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

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

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

742. Cabin surveillance and cabin video monitoring can be displayed in the cockpit on the....

a. electronic flight instruments system.
b. electronic flight bag.
c. multipurpose control display unit.

743. During a flight the InFlight Entertainment System (IFE) receives and transmit data, using?

a. ILS
b. HF
c. Satcom

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

745. 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.

746. The dimmable window function is managed by....

a. the cabin attendant panel and cabin zone unit.
b. the passenger control unit.
c. the passenger service module.

747. A change of the number of cabin seats means that....

a. more data concentrators must be installed.
b. less master call light modules are needed.
c. the CSSC software must be updated.

748. The Cockpit Door Surveillance System is?

a. a system to assist the flight crew to identify a person requesting access to the flight-deck.
b. A synoptic page, indicating if all doors are closed, meaning ready for flight.
c. used to assist the air-bridge operator to align the air-bridge with the cockpit door.

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

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

750. Inside modern transport aircraft, two main data networks are defined.

These networks are....

a. crew wireless lan and open data network
b. isolated data network and crew wireless lan
c. avionics or isolated data network and open data network

751. The aircraft flight data recorder which stores critical aircraft data, is connected to:

a. the open data network
b. the SATCOM system directly
c. the isolated data network

752. To upload data from a maintenance laptop to the isolated data network you must:

a. have a connection to the common data network
b. have a connection directly to the Ethernet gateway module
c. have the correct security configuration installed

753. Non-critical aircraft data is accessible via the:

a. isolated data network
b. common data network
c. open data network

754. The satellite communication system is accessible for the cabin through:

a. the common data network

b. the isolated data network
c. the open data network

755. The electronic flight bag system can help the flight crew do calculations for:

a. in-flight navigation
b. engine control functions
c. aircraft weight and balance

756. A laptop for retrieving maintenance data must be physically connected to:

a. the open data network
b. the EFB electronic unit
c. the isolated data network

757. One of the functions integrated in IMA is:

a. wifi for non-critical flight data exchange
b. wifi for fly by wire control
c. wifi for critical flight data exchange

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

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

759. 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.

760. Where is the Electronic Flight Bag used for?

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

761. Where is the cockpit electronic flight bag used for?

a. To keep navigational charts and airport diagrams.

b. Top keep both, navigational charts and airport diagrams and the flight crew operating manual.
c. To keep the flight crew operating manual.

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

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

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

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

764. Wireless fidelity (wifi) is used for:

a. only for maintenance purposes
b. aircraft non-critical data
c. flight critical data