Question block created by wizard

This exam contains 84 questions.

1. What is the main purpose of a Frise aileron?

- (a) Increase drag on the downgoing wing.

o (b) Help pilot overcome aerodynamic loads.
o (c) Increase drag on the up going wing.

If choice a is selected set score to 1.

2. The purpose of a spring tab is to....

o (a) provide a constant load resistance to surface deflection at all speeds.
o (b) provide feel back in a control system.

- (c) provide a reduction in the pilot's effort to move the controls against high air loads.

If choice c is selected set score to 1.

3. When an aircraft fitted with spoilers is rolled to the left, what is the movement of the spoilers?

- (a) left spoiler is deflected up.

o (b) left upper spoiler up and left lower spoiler down.
o (c) left spoiler is deflected up and the right down.

If choice a is selected set score to 1.

4. Aerodynamic speeds vary all the way from low subsonic to hypersonic. The limits of transonic speed range are

- (a) 0.8 to 1.2 M

o (b) 0.3 to 0.8 M
o (c) 1.2 to 5 M

If choice a is selected set score to 1.

5. Aerodynamic speeds vary all the way from low subsonic to hypersonic. The limits of supersonic speed range are

o (a) 0.8 to 1.2 M
o (b) 0.3 to 0.8 M

- (c) 1.2 to 5 M

If choice c is selected set score to 1.

6. An aircraft....

- (a) has more than one critical mach number on the wing only.
- (b) has more than one critical mach number on different parts of the aircraft.
- (c) has only one critical mach number.

If choice b is selected set score to 1.

7. What will the advancing blade do during forward flight?

- (a) lag.
- (b) flap up.
- (c) flap down.

If choice b is selected set score to 1.

8. What happens to the RPM of the rotor, when lifting the collective lever during an autorotative descent?

- (a) reduce.
- (b) remain the same.
- (c) increase.

If choice a is selected set score to 1.

9. How are skin panels strengthened?

- (a) struts.
- (b) stringers.
- (c) cleats.

If choice b is selected set score to 1.

10. What is a damage tolerant design?

- (a) allows for certain damage to the structure to go un-repaired between scheduled maintenance.
- (b) is applied only to secondary structure.
- (c) allows for damage to structure but loses its structural strength.

If choice a is selected set score to 1.

11. Fuselage station numbers are measured from the front of the aircraft. In what unit are they measured?

- o (a) feet.
- o (b) feet and inches.
- • (c) inches.

If choice c is selected set score to 1.

12. How should all electronic equipment bondings be installed in the aircraft structure?

- • (a) With a low impedance path to the airframe structure.
- o (b) With a low current path to the airframe structure.
- o (c) With a high impedance path to the airframe structure.

If choice a is selected set score to 1.

13. What is used to protect the nose radome from lightning strikes?

- • (a) Lightning diverter strips.
- o (b) Bonding wire.
- o (c) The radome is composite material and does not require a special lightning protection.

If choice a is selected set score to 1.

14. Radio waves travel at what speed?

- • (a) Speed of light.
- o (b) Speed of the Earth's rotation.
- o (c) Speed of sound.

If choice a is selected set score to 1.

15. If a wave has a velocity of 4800 meter per second and a wave-length of 5 meter, what is the frequency of the wave?

- o (a) 0,96 MHz
- • (b) 960 Hz
- o (c) 9,6 kHz

If choice b is selected set score to 1.

16. The relationship between the electric field and the magnetic field in a dipole or monopole antenna are....

- o (a) in phase on a monopole and out of phase in a dipole.
- • (b) out of phase by 90°.
- o (c) in phase.

If choice b is selected set score to 1.

17. A measurement of the voltage to current ratio (Vin/Iin) at the input end of a transmission line is called the

- • (a) input impedance.
- o (b) voltage-gain ratio.
- o (c) input-gain rate.

If choice a is selected set score to 1.

18. The Selcal (Selective Calling) can be used by....

- • (a) VHF and HF systems.
- o (b) VHF system only.
- o (c) HF system only.

If choice a is selected set score to 1.

19. The VHF (very high frequency) range of the radio spectrum is the band extending from

- o (a) 3 to 30 GHz
- • (b) 30 MHz to 300 MHz.
- o (c) 300 to 3000 MHz.

If choice b is selected set score to 1.

20. VHF is used by ground control facilities and aircraft or by aircraft and other aircraft on one of ……. possible frequency channels with …... spacing between channels.

- o (a) 360 - 8.33 kHz
- • (b) 720 - 25 kHz
- o (c) 2280 - 50 kHz

If choice b is selected set score to 1.

21. The VHF (very high frequency) is the standard civil short range communication facility using the band of frequencies between

- o (a) 2 and 29.999 MHz.
- • (b) 118 and 136 MHz.
- o (c) 1.5 to 1.6 GHz.

If choice b is selected set score to 1.

22. The Cockpit Voice Recorder of a large transport aircraft will always store the last....

- o (a) 120 minutes.
- • (b) 30 minutes.
- o (c) 60 minutes.

If choice b is selected set score to 1.

23. The Cockpit Voice Recorder of an aircraft of 5700 kg or less will always store the :

- • (a) last 30 minutes.
- o (b) last 120 minutes.
- o (c) last 60 minutes.

If choice a is selected set score to 1.

24. New ELT s will transmit on ..... so that the signal can be picked up by the Search and Rescue satellite network.

- • (a) 406.025 MHz
- o (b) 108.10 MHz
- o (c) 121.5 MHz

If choice a is selected set score to 1.

25. ILS is subject to false glide paths resulting from:

- • (a) multiple lobes of radiation patterns in the vertical plane.
- o (b) ground returns ahead of the antennas.
- o (c) false signals reflected by nearby obstacles.

If choice a is selected set score to 1.

26. Concerning conventional and Doppler VORs (DVOR), which of the following is correct?

- o (a) The DVOR will always have a "D" in the ident.
- • (b) It is not possible for the instrumentation display to determine which type is being used.
- o (c) The DVOR has a higher audio ident tone than the standard VOR.

If choice b is selected set score to 1.

27. What is the colour sequence when passing over an Outer, Middle and Inner Marker beacon?

- o (a) amber(yellow) - white - green
- o (b) blue - green - white
- • (c) blue - amber(yellow) - white

If choice c is selected set score to 1.

28. What is the glide slope frequency range?

- o (a) 108 - 112 Mhz.
- o (b) 108 - 112 Ghz.
- • (c) 329 - 335 Mhz.

If choice c is selected set score to 1.

29. The period of validity of the navigational database is:

- • (a) 28 days.
- o (b) 1 month.
- o (c) 91 days.

If choice a is selected set score to 1.

30. When power is applied to the FMS, the CDU shows the....

- o (a) route (RTE) page.
- o (b) climb (CLB) page for take-off.
- • (c) ident page.

If choice c is selected set score to 1.

31. Which one of the following inputs to an Area Navigation System (R-NAV) comes from an external, not on-board, system?

- • (a) VOR/DME radial/distance.

- o (b) Inertial Navigation System (INS) position.
- o (c) Magnetic heading.

If choice a is selected set score to 1.

32. The Flight Management Computer (FMC) position is:

- o (a) the actual position of the aircraft at any point in time.
- o (b) another source of aircaft position; it is independent of other position sources (IRS, Radio, ILS etc).
- • (c) the computed position based on a number of sources (IRS, Radio, ILS, GPS etc).

If choice c is selected set score to 1.

33. What is an FMC?

- o (a) A flight management inertial reference system.
- o (b) An autopilot/flight director system.
- • (c) A flight management computer.

If choice c is selected set score to 1.

34. If there is no (navigation) radio updating, what effect will this have on the FMS?

- o (a) this will have no effect on the FMS.
- o (b) this FMS will automatically update the system.
- • (c) this may cause the FMS to deviate from the desired track.

If choice c is selected set score to 1.

35. Which of the following combinations of satellite navigation systems provide the most accurate position fixes in air navigation?

- o (a) GLONASS and COSPAS-SARSAT.
- • (b) NAVSTAR/GPS and GLONASS.
- o (c) NNSS-Transit and GLONASS.

If choice b is selected set score to 1.

36. The satellites (GPS) provide: position, time data and....

- o (a) flightplan.
- • (b) velocity.
- o (c) distance from departure.

If choice b is selected set score to 1.

37. The space segment of GPS consists of a minimum of....

- o (a) 27 satellites.
- o (b) 21 satellites.
- • (c) 24 satellites.

If choice c is selected set score to 1.

38. The electrolyte in a NiCd battery is?

- o (a) Lithium based.
- o (b) Acid based.
- • (c) Alkaline based.

If choice c is selected set score to 1.

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

- o (a) When the aircraft electrical load increases, the output current increases.
- • (b) When the aircraft electrical load increases, the output voltage increases.
- o (c) When the aircraft electrical load increases, the output voltage remains the same.

If choice b is selected set score to 1.

40. The output of a single coil generator is

- o (a) a flat line.
- • (b) a sine-wave.
- o (c) a saw foot.

If choice b is selected set score to 1.

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

- • (a) DC alternator.
- o (b) Brushless alternator.
- o (c) DC generator.

If choice a is selected set score to 1.

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

- (a) 90 degrees
- (b) 120 degrees
- (c) 60 degrees

If choice b is selected set score to 1.

43. 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.

If choice c is selected set score to 1.

44. How is voltage regulation achieved on DC generators?

By changing the....

- (a) generator speed.
- (b) field voltage.
- (c) field current.

If choice c is selected set score to 1.

45. In a parallel bus configuration the generators will:

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

If choice b is selected set score to 1.

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

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

If choice c is selected set score to 1.

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

- (a) Thermal switch.

o (b) Thermocouple.
o (c) Voltage sensor.

If choice a is selected set score to 1.

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

o (a) Electromagnetic circuit breakers.
o (b) Automatic reset circuit breaker.

- (c) Trip free circuit breaker.

If choice c is selected set score to 1.

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

o (a) Battery bus.

- (b) The ground handling bus.

o (c) The external power bus.

If choice b is selected set score to 1.

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

- (a) Wing scan lights.

o (b) Runway turn-off lights.
o (c) Position lights.

If choice a is selected set score to 1.

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

o (a) Spot lights
o (b) Incandescent lightbulbs.

- (c) Fluorescent tubes.

If choice c is selected set score to 1.

52. Which statement is true?

o (a) When operating the external emergency light switch both internal and external lights come on.

- (b) When the internal emergency light switch is used both internal and external emergency light come on.

o (c) Operating the internal emergency light switch only turns on the internal emergency lights.

If choice b is selected set score to 1.

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

A turbo compressor....

- (a) is used on turbo-prop and piston engine.

o (b) is used as a supplemental use source of bleed air.
o (c) can be switched on and off by the crew.

If choice a is selected set score to 1.

54. The aircraft airconditioning system keeps the....

o (a) cabin altitude (pressure) at 10.000 ft.

- (b) cabin pressure at 8000 ft cabin altitude.

o (c) humidity high in the cabin.

If choice b is selected set score to 1.

55. When the refrigerant loses heat in a vapour cycle system....

o (a) the liquid converts to a vapour.
o (b) the liquid evaporates to the environment.

- (c) the vapour converts to a liquid.

If choice c is selected set score to 1.

56. Where is the water separator located?

- (a) Downstream of the compressor.

o (b) Downstream of anti ice valve.
o (c) Downstream of the turbine.

If choice a is selected set score to 1.

57. Heating for pressure cabins is obtained from....

- (a) air supply heated by adding hot bleed air.

- (b) air cycle machine.
- (c) only by adding heat electrically to the air supply.

If choice a is selected set score to 1.

58. What must be the minimum humidity in the cabin?

- (a) 20 %.
- (b) 60 %.
- (c) 30 %.

If choice c is selected set score to 1.

59. 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.

If choice c is selected set score to 1.

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

- (a) trim valve.
- (b) outflow valves.
- (c) vent valve.

If choice b is selected set score to 1.

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

- (a) rapidly open.
- (b) at a fixed rate.
- (c) full open at touchdown.

If choice b is selected set score to 1.

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

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

If choice c is selected set score to 1.

63. What protects the aircraft from over-pressurization?

- o (a) The outflow valve.
- o (b) Cabin pressure controller.
- • (c) The positive pressure relief valve.

If choice c is selected set score to 1.

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

- o (a) nitrogen gas.
- • (b) helium gas.
- o (c) air.

If choice b is selected set score to 1.

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

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

If choice b is selected set score to 1.

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

- o (a) Halon avoids smoke, keeping the cockpit 'visual'.
- • (b) Because on fires in electronics you may only use halon.
- o (c) Because halon fire-bottles can be made much smaller and lighter and so much easier to handle by the pilot from the seat.

If choice b is selected set score to 1.

67. Cross feed valves permit fuel transfer from ...

- • (a) any tank to any engine.
- o (b) tank to tank.
- o (c) left tank to right tank.

If choice a is selected set score to 1.

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

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

If choice b is selected set score to 1.

69. Pressure refuelling is carried out at ….

- o (a) 20 PSI.
- • (b) 40 PSI.
- o (c) 100 PSI.

If choice b is selected set score to 1.

70. How do you prevent hydraulic fluid foaming?

- o (a) vent reservoir to atmosphere.
- o (b) pass over a tray.
- • (c) by pressurising.

If choice c is selected set score to 1.

71. What is the purpose of a 'cut-out' valve in a hydraulic system?

- • (a) is to relieve the pump of load when the operation of services is complete and the accumulator charged with fluid.
- o (b) is to limit loss of fluid in the event of pipe fracture.
- o (c) is to prevent creep in jack operated services which have several selected positions.

If choice a is selected set score to 1.

72. When a hydraulic lock condition in a jack occurs, what happens to the hydraulic flow?

- o (a) no flow, but jack continues to move under gravity.
- • (b) no flow, jack is stationary.
- o (c) flow, but no movement.

If choice b is selected set score to 1.

73. Which system supplies air for anti-icing of the wings?

- (a) engine compressors.

o (b) a combustion heater.
o (c) air conditioning ducting.

If choice a is selected set score to 1.

74. How and when is windshield rain repellent applied?

o (a) before rain and spread on window surface by wipers.
o (b) rubbed on the surface of the windscreen, prior to flight.

- (c) during rain and spread on windows surface by wipers.

If choice c is selected set score to 1.

75. What is a stripe or mark extending from the rim of a wheel onto the tire?

o (a) A balance mark.
o (b) Indicates the tire is a high-pressure type.

- (c) A creep mark.

If choice c is selected set score to 1.

76. Why must the nose wheel assembly be centered before retraction?

o (a) The tires may be damaged on landing if the nose wheel is not centered
o (b) The aircraft may swerve on the next landing if the nose wheel is not centered.

- (c) Damage to the gear or frame structure may occur if it is not centered.

If choice c is selected set score to 1.

77. The pilot receives an audible warning on the flight deck as the aircraft is descending to land.

The most likely reason for this warning is ...

- (a) the landing gear is not locked down.

o (b) the wheelspeed is too high.
o (c) the brake temperature is too high.

If choice a is selected set score to 1.

78. Which of the following are characteristics of a carbon brake?

o (a) have less weight than normal brake units but fade away at high temperatures.
o (b) weigh the same as normal brake units and fade away at high temperatures.

- (c) have less weight than normal brake units and have increased efficiency at high temperatures.

If choice c is selected set score to 1.

79. Why is a hydraulic damper fitted to a nose wheel steering system?

o (a) To centralise the nose leg assembly during an up selection.

- (b) to reduce vibration and shimmy.

o (c) to centralise the nose wheel during an up selection.

If choice b is selected set score to 1.

80. What is the result when the steel target is in close proximity to the proximity sensor?

o (a) An open switch.
o (b) A failed switch.

- (c) A closed switch.

If choice c is selected set score to 1.

81. Cabin chemical oxygen generators are located in?

o (a) The overhead bins.

- (b) The passenger service units.

o (c) The cargo hold.

If choice b is selected set score to 1.

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

o (a) Ozone

- (b) Sodium chlorate and iron

o (c) Sodium hydroxide

If choice b is selected set score to 1.

83. What is important about the air entering a dry air pump?

- (a) It must be filtered.

o (b) It must be temperature controlled.
o (c) It must be pressure controlled.

If choice a is selected set score to 1.

84. What happens if the pneumatic system bleed air is OFF, purposely or by failure?

- (a) a caution appears on the ECAM or EICAS screen.
- (b) the OFF light in the control switch illuminates and a memo appears on the ECAM or EICAS screen.

- (c) the OFF light in the control switch illuminates and a warning appears on the ECAM or EICAS screen.

If choice c is selected set score to 1.

If assessment score is 75% to 100% Pass
If assessment score is 0% to 74% Fail