Question block created by wizard

This exam contains 84 questions.

1. About which axis does rolling occur?

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

2. Which flight control surfaces does have a Flaperon function?

a. flaps and speed brakes.
b. flaps and ailerons.
c. flaps and elevators.

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

a. left upper spoiler up and left lower spoiler down.
b. left spoiler is deflected up and the right down.
c. left spoiler is deflected up.

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

a. 0.3 to 0.8 M
b. 1.2 to 5 M
c. 0.8 to 1.2 M

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

a. 0.8 to 1.2 M
b. 1.2 to 5 M
c. 0.3 to 0.8 M

6. Above the critical Mach number, the drag coefficient

a. remains the same.
b. decreases.
c. increases.

7. What is the ability of the rotor blade to move up and down called?

a. feathering.
b. flapping.
c. dragging.

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

a. remain the same.
b. increase.
c. reduce.

9. How are skin panels strengthened?

a. stringers.
b. cleats.
c. struts.

10. What are the main longitudinal members in a fuselage called?

a. longerons.
b. spars.
c. frames.

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

a. feet.
b. feet and inches.
c. inches.

12. What types of nuts must be used for bonding connections?

a. Nylon self locking nuts.
b. Self locking nuts of all metal construction.
c. Nuts must not be used for bonding.

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

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

14. An increase in the frequency of a radio wave will have what effect, if any, on the velocity of the radio wave?

a. Increase.
b. None.
c. Decrease.

15. The bending of a radio wave because of a change in its velocity through a medium is known as....

a. diffraction.
b. reflection.
c. refraction.

16. With reference to antennas, parasitic elements are:

a. unfed elements which make the radiation pattern directional.
b. unfed elements which make the antenna radiation pattern omnidirectional.
c. dipole or folded dipole radiating elements.

17. Radio-frequency waves cannot be seen for which of the following reasons?

a. Because radio-frequency waves are above the sensitivity range of the human eye.
b. Because radio-frequency waves are below the sensitivity range of the human eye.
c. Because radio-frequency energy is low powered.

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

a. VHF system only.
b. VHF and HF systems.
c. HF system only.

19. Satisfactory two-way VHF communication can typically be maintained up to …... miles, this range dependent on the aircraft height.

a. 2000
b. 20
c. 200

20. The mode of operation of the VHF comms transceiver is

a. single channel simplex.

b. single channel duplex.
c. double channel duplex.

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

a. 118 and 136 MHz.
b. 1.5 to 1.6 GHz.
c. 2 and 29.999 MHz.

22. Operation of an ELT....
1. is automatic on impact by a "G" force switch in the transmitter.
2. can be done through a remote switch in the cockpit.
3. can be done by a switch on the unit itself.
4. can be turned off with the switch on the case.

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

23. When activated, the battery of an ELT must be capable of furnishing power for signal transmission for at least ……

a. 24 hours.
b. 48 hours.
c. 28 days.

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

a. last 60 minutes.
b. last 30 minutes.
c. last 120 minutes.

25. In an ADF system, night effect is most pronounced:

a. during long winter nights.
b. at dusk and dawn.
c. when the aircraft is at high altitude.

26. Bearing information in an ADF system is....

a. provided by the flight management system.
b. measured and calculated by the ADF system.

c. received by the antenna.

27. Transmissions from VOR facilities may be adversely affected by....

a. uneven propagation over irregular ground surfaces.
b. night effect.
c. static interference.

28. The aircraft DME receiver is able to accept replies to its own transmissions and reject replies to other aircraft interrogations because:

a. transmission frequencies are 63 MHz different for each aircraft.
b. pulse pairs are amplitude modulated with the aircraft registration.
c. pulse pairs are discreet to a particular aircraft.

29. What is the required accuracy of a precision area navigation system?

a. 1 nautical mile.
b. 5 nautical miles.
c. 10 nautical miles.

30. A basic RNAV system will determine tracking information from....

a. Twin VOR.
b. VOR/DME.
c. twin DME.

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

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

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

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

33. In the FMS vertical navigation (VNAV) climb mode the throttles are used for

a. maintaining a computed EPR.
b. correction for minor speed deviations.
c. controlling to a maximum thrust.

34. All the last generation aircraft use flight control systems. The FMS is the most advanced system. It can be defined as a....

a. 2-axis Flight Management System.
b. 3-axis Flight Management System.
c. management system optimized in the horizontal plane.

35. GPS sends different codes, what are these codes?

a. C/A code and P (precision) code.
b. P code only.
c. C/A (coarse/acquisition) code only.

36. What is the pseudo-random code used by all civilian GPS users?

a. the Y code.
b. the P code.
c. the C/A code.

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

a. velocity.
b. flightplan.
c. distance from departure.

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

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

39. What determines the amount of induced voltage?

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

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

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

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

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

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

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

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

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

44. How is voltage regulation achieved on DC generators?

By changing the....

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

45. 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.

46. Which formula represents the transformer ratio?

a. V2 x V1 = N2 x N1

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

47. Transformer rectifiers are used for:

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

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

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

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

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

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

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

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

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

52. Which statement is true?

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

53. 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. Some bleed air systems will use only the low pressure stage, others will use the high stage.
c. If the low pressure stage supply fails, the high stage takes over.

54. What is the purpose of the air conditioning system?

a. Increase and decrease the temperature of air and pressurize the aircraft.
b. Control the temperature, air flow and humidity.
c. Increase the temperature of air and humidity.

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

a. the vapour converts to a liquid.
b. the liquid converts to a vapour.
c. the liquid evaporates to the environment.

56. The heat exchanger in a turbo-fan system is cooled by …

a. air bled from the main cabin supply duct.
b. engine bleed air or blower air.
c. ambient ram air.

57. What is the benefit of injecting water in the ram air duct?

a. Improve the efficiency of the heat exchanger.
b. Cool the air cycle machine.
c. Make the cabin air less dry.

58. A large aircraft air conditioning system's cabin temperature control....

a. involves modulating the pack valve.
b. is selectable for each zone individually from the flight deck.
c. all zone temperatures are controlled from one master switch.

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.

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

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

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

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

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

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

63. The emergency pressure control valve....

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

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

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

65. How is avionics smoke detected?

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

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

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

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

67. On Large transport aircraft fuel is delivered to each engine using …

a. a separate system for each engine.
b. a parallel system.
c. the same system for each engine.

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

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

69. Pressure refuelling is carried out at ….

a. 20 PSI.
b. 40 PSI.
c. 100 PSI.

70. How do you prevent hydraulic fluid foaming?

a. vent reservoir to atmosphere.
b. by pressurising.
c. pass over a tray.

71. What is the normal operating pressure of a hydraulic system?

a. 300 PSI.
b. 1800 PSI.
c. 3000 PSI.

72. Throttling valves in a hydraulic system are used to …

a. control the flow rate of system operation.
b. restrict the rate of pressure build up.
c. limit the maximum pressure.

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

a. engine compressors.
b. air conditioning ducting.
c. a combustion heater.

74. What must you be aware of when testing pitot head heaters?

a. They can only be checked by noting the rate of temperature rise of the probe.
b. They must only be switched on for the minimum time required to check serviceability.
c. They should be switched on for five minutes to allow to stabilise before taking ammeter readings.

75. What does a green/grey spot marking on aircraft tyre casing represent?

a. Leak holes.
b. The light part of the tyre.
c. Military reference.

76. On all aircraft equipped with retractable landing gear, some means must be provided to ..

a. extend the landing gear if the normal operating mechanism fails.
b. prevent extension of the landing gear at airspeeds greater than that determined structurally safe.
c. retract and extend the landing gear if the normal operating mechanism fails.

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.
b. the brake temperature is too high.
c. the wheelspeed is too high.

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

a. have less weight than normal brake units but fade away at high temperatures.
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.

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

a. To centralise the nose leg assembly during an up selection.
b. to reduce vibration and shimmy.
c. to centralise the nose wheel during an up selection.

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

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

81. Cabin chemical oxygen generators are located in?

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

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

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

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

a. It must be filtered.
b. It must be temperature controlled.
c. It must be pressure controlled.

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.