Question block created by wizard

This exam contains 84 questions.

1. How can adverse yaw when rolling about the longitudinal axis be prevented?

a. a smaller fin.
b. equal deflection lateral control surfaces.
c. differential ailerons.

2. When a Leading edge flap is fully extended, what is the slot in the wing for?

a. To allow the flap to retract into it when it retracts.
b. To re-energise the boundary layer.
c. To increase the lift.

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

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

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

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

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.

7. What limits the maximum forward speed of a helicopter?

a. retreating blade stall and the forward speed of the advancing blade.
b. engine power.
c. the shape of the fuselage.

8. How does collective control input affect the pitch of the blades?

a. increases the angle on the retreating blade and reduces it on the advancing one.
b. increases the angle on the advancing blade and reduces it on the retreating one.
c. increases the pitch angle the same amount on all blades.

9. Which of the following is an example of a failsafe structure?

a. Multiple Spars.
b. Nose radome.
c. Single stringer.

10. How are skin panels strengthened?

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

11. What is a Fuselage body Station?

a. longitudinal point on the fuselage.
b. lateral point on a wing.
c. lateral point on the fuselage.

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

a. With a low current path to the airframe structure.
b. With a low impedance path to the airframe structure.
c. With a high impedance path to the airframe structure.

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

a. in phase.
b. out of phase by 90°.
c. in phase on a monopole and out of phase in a dipole.

15. Energy is transmitted from a transmitter into space using which of the following devices?

a. a delay time.
b. an antenna.
c. a receiver.

16. At frequencies above 100 MHz, the greatest attenuation of rf energy from raindrops is caused by which of the following factors?

a. ducting.
b. scattering.
c. absorption.

17. For a frequency of 121.95 MHz, what is the wavelength?

a. 2.46 m
b. 2.46 km
c. 2.46 cm

18. A squelch circuit disables the receiver output, ...

a. when no signals are being received so preventing noise being fed to the crew headsets between ground transmissions.
b. when a SELCAL is received from ground stations equipped with a coding device.
c. when satcom is selected.

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

a. 20
b. 200
c. 2000

20. The HF (high frequency) range of the radio spectrum is the band extending from

a. 300 MHz to 3 GHz

b. 30 MHz to 300 MHz.
c. 2 - 30 MHz

21. 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.

a. 2280 - 50 kHz
b. 360 - 8.33 kHz
c. 720 - 25 kHz

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

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

23. The Cockpit Voice Recorder (CVR) records :
1. conversations between pilot and co-pilot.
2. conversations between cockpit crew and air traffic controllers.
3. passenger announcements.
4. ambient cockpit sounds for example deployment of the landing gear.

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

24. 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 and 4.
c. 1, 2, 3 and 4.

25. The MIDDLE MARKER of an Instrument Landing System (ILS) facility is identified audibly and visually by a series of:

a. dots and a white light flashing.
b. alternate dots and dashes and an amber/yellow light flashing.
c. dashes and an amber light flashing.

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

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

27. In a Doppler VOR (DVOR) the reference signal is …(1)…, the bearing signal is …(2)…and the direction of rotation of the bearing signal is…(3)..

a. (1) AM - (2) FM - (3) clockwise.
b. (1) FM - (2) AM - (3) clockwise.
c. (1) AM - (2) FM - (3) anti-clockwise.

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

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

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

a. 28 days.
b. 91 days.
c. 1 month.

30. The IRS position can be initialized....

a. at designated positions en-route and on the ground.
b. on the ground and in flight with VOR/DME.
c. on the ground only.

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

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

32. To know the valid data base on the FMS

a. call up the relevant page on the CDU.
b. call up the relevant current status.
c. perform a BITE check.

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. If one FMS fails in a dual system

a. FMS display transfers data automatically from serviceable computer.
b. FMS CDU on fail side goes blank.
c. system operation will not be affected.

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

a. GLONASS and COSPAS-SARSAT.
b. NNSS-Transit and GLONASS.
c. NAVSTAR/GPS and GLONASS.

36. Which of the following lists all the parameters that can be determined by a GPS receiver tracking signals from 4 different satellites?

a. Latitude and longitude.
b. Latitude, longitude, altitude and time.
c. Latitude, longitude and altitude.

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

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

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

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

39. What is the purpose of a rectifier?

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

40. The output of a single coil generator is

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

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

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

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

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

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

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

44. How is voltage regulation achieved on DC generators?

By changing the....

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

45. In a parallel bus configuration the generators will:

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

46. 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.

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

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

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

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

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

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

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

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

a. cabin altitude (pressure) at 10.000 ft.
b. cabin pressure at 8000 ft cabin altitude.
c. humidity high in the cabin.

55. A refrigerant is used in....

a. an air cycle machine.
b. a vapour cycle.
c. a pneumatic pump.

56. 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.

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

a. only by adding heat electrically to the air supply.
b. air supply heated by adding hot bleed air.
c. air cycle machine.

58. Temperature control of cabin air is achieved by....

a. controlling the speed of the air cycle machine.
b. regulating the amount of hot air added to the conditioned air.
c. varying the ambient airflow to the heat exchanger.

59. 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.

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

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

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

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

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

a. Manually
b. Hydraulically
c. Electrically

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

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

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

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

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

a. Halon avoids smoke, keeping the cockpit 'visual'.
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. Because on fires in electronics you may only use halon.

67. To decrease the amount of **unusable** fuel, what is fitted to the engine feed manifold?

a. float valve.
b. drain check valve.
c. NACA duct.

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

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

69. Pressure refuelling is carried out at ….

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

70. Which component in a hydraulic system ensures immediate response when a service is selected?

a. accumulator.
b. selector.
c. engine driven pump.

71. A constant volume hydraulic system uses a(n).... to relieve pressure in the system when no services are being used?

a. Pressure relief valve.
b. return line back to pump.
c. ACOV (Automatic Cut Out Valve).

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

a. no flow, but jack continues to move under gravity.
b. no flow, jack is stationary.
c. flow, but no movement.

73. Under which condition does an air pressure operated ice detector work?

a. A build up of ice on the leading edge causes a warning light to illuminate on the flight deck.
b. It has to be completely covered in ice before causing an alarm to sound on the flight deck.

c. A build up of ice causes a torque switch to illuminate a flight deck annunciator.

74. What is the source of air for the windscreen pneumatic rain removal system?

a. engine bleed air.
b. the venturi windscreen duct.
c. a dedicated pneumatic motor to drive windscreen wipers.

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

a. Indicates the tire is a high-pressure type.
b. A balance mark.
c. A creep mark.

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

a. Damage to the gear or frame structure may occur if it is not centered.
b. The tires may be damaged on landing if the nose wheel is not centered
c. The aircraft may swerve on the next landing if the nose wheel is not centered.

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 wheelspeed is too high.
b. the landing gear is not locked down.
c. the brake temperature is too high.

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

a. weigh the same as normal brake units and fade away at high temperatures.
b. have less weight than normal brake units but 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 reduce vibration and shimmy.
b. To centralise the nose leg assembly during an up selection.
c. to centralise the nose wheel during an up selection.

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

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

81. Cabin chemical oxygen generators are located in?

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

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

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

83. What type of air pump is commonly used in low pressure pneumatic systems?

a. Centrifugal pump.
b. Piston pump.
c. Vane pump.

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

a. the OFF light in the control switch illuminates and a warning 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. a caution appears on the ECAM or EICAS screen.