11A.12. Ice and Rain Protection (ATA 30).

Question Number. 1. How is a serrated rod ice detector bench tested?.
Option A. Screwdriver torque test.
Option B. By a motor load test.
Option C. Motor test and go/no-go gap measurement.
Correct Answer is. Screwdriver torque test.
Explanation. Retard rotation [of the detector] with slight thumb pressure using a torque screwdriver.' Ref: CAIPs AL/11-6.

Question Number. 2. Windshield heating provides.
Option A. thermal expansion for a tighter fit.
Option B. impact resistance enhancement.
Option C. increases strength to resist cabin pressure.
Correct Answer is. impact resistance enhancement.
Explanation. Jeppesen A&P Technician Airframe Textbook Page 13-6 (last paragraph).

Question Number. 3. At what pressure and temperature is anti ice fluid applied?.
Option A. 7°F at 100 PSI.
Option B. 70°C at 100 PSI.
Option C. 70°F at 10 PSI.
Correct Answer is. 70°C at 100 PSI.
Explanation. CAIPs AL/11-3 5.2.2.

Question Number. 4. The advantage of leading edge fluid de-icing is.
Option A. less of a fire hazard.
Option B. aerodynamic shape is not disturbed.
Option C. more efficient.
Correct Answer is. aerodynamic shape is not disturbed.
Explanation. The advantage of leading edge fluid de-icing is aerodynamic shape is not disturbed.

Question Number. 5. On large transport aircraft, the windshield wiper system is.
Option A. one system for both sides but with the same power source.
Option B. independent on each side but with the same power source.
Option C. independent on each side with different power sources.
Correct Answer is. independent on each side with different power sources.
Explanation. Aircraft Electrical Systems, Pallett, Page 178.

Question Number. 6. Prior to securing a leading edge de-icing boot you must.

Option A. remove all paint.
Option B. paint the surface.
Option C. shave rivet to prevent further abrasion.
Correct Answer is. remove all paint.
Explanation. CAIPs AL/11-1 4.2.2.

Question Number. 7. On a 'hot rod' type of ice detector, it is switched on.
Option A. all the time.
Option B. when selected by the crew.
Option C. when in the air.
Correct Answer is. when selected by the crew.
Explanation. AL/11-6 3.2.1.

Question Number. 8. Ice formation on wings is due to.
Option A. suspended ice crystals melting on contact with the wing and instantly re-freezing.
Option B. ice crystals forming layers on contact with the wing.
Option C. supercooled water changing state on contact with the wing.
Correct Answer is. supercooled water changing state on contact with the wing.
Explanation. AL/11-6 2.

Question Number. 9. When a vibrating rod ice detector has de-iced, the warning lamp on the flight deck.
Option A. goes out immediately.
Option B. goes out after one more cycle.
Option C. goes out after a set period of time.
Correct Answer is. goes out after a set period of time.
Explanation. CAIPs AL/11-6 3.4.1.

Question Number. 10. De-misting of passenger windows is provided by.
Option A. sealed window.
Option B. an electrical heating element.
Option C. air from the cabin.
Correct Answer is. air from the cabin.
Explanation. CAIPs AL/3-24 fig 1.

Question Number. 11. A deicer boot is completely bonded to the leading edge to.
Option A. provide smoother airflow over leading edge.
Option B. prevent electrical static build up.
Option C. provide more efficient deicer cycles.
Correct Answer is. prevent electrical static build up.
Explanation. CAIPs AL/11-1 3.4 (unless they mean 'bonded' as in cemented. In which case the

answer is b).

Question Number. 12. In a cockpit window heater system, the autotransformer.
Option A. supplies DC power for heating.
Option B. supplies AC Power for heating.
Option C. steps up output for severe weather conditions.
Correct Answer is. steps up output for severe weather conditions.
Explanation. Aircraft Electrical Systems Pallett Page 62/63 (Note: a transformer cannot 'supply'.

Question Number. 13. Windshield rain repellent is applied.
Option A. when rain is on windows and spread by wipers.
Option B. before rain and spread on window surface by wipers.
Option C. when in heavy rain so vision is unobscured.
Correct Answer is. when rain is on windows and spread by wipers.
Explanation. Jeppesen, A&P Airframe Textbook Page 13-17.
http://www.b737.org.uk/iceandrain.htm

Question Number. 14. Pneumatic rain removal systems.
Option A. use engine bleed air at high velocity to remove water droplets from windscreen.
Option B. are not permitted on large transport aircraft.
Option C. use a pneumatic motor to drive windscreen wipers.
Correct Answer is. use engine bleed air at high velocity to remove water droplets from windscreen.
Explanation. Jeppesen A & P Technician Airframe Textbook page 13-18.

Question Number. 15. Windscreen wiper torque tests are carried out at.
Option A. blade attachment end.
Option B. centre point of the blade.
Option C. the shaft end.
Correct Answer is. the shaft end.
Explanation. NIL.

Question Number. 16. Windscreen autotransformers.
Option A. step down voltage.
Option B. step up voltage.
Option C. are used to supply extra current under difficult conditions.
Correct Answer is. step up voltage.
Explanation. AL/11-4 4.2.2.

Question Number. 17. An ice deposit formed when liquid water flows over the airframe before freezing, and which is dense, tough and sticks closely to the surface is called.
Option A. glaze Ice.
Option B. rime Ice.
Option C. hoar Frost.
Correct Answer is. glaze Ice.
Explanation. NIL.

Question Number. 18. When testing pitot head heaters.
Option A. they can only be checked by noting the temperature rise of the probe.
Option B. they must only be switched on for the minimum time required to check serviceability.
Option C. they should be switched on for five minutes to allow to stabilise before taking ammeter readings.
Correct Answer is. they must only be switched on for the minimum time required to check serviceability.
Explanation. NIL.

Question Number. 19. A rotary knife edge ice detector provides warning of ice by.
Option A. increased torque caused by ice formation slowing the rotating wheel and illuminating a warning light in the cockpit.
Option B. decreased torque caused by ice formation slowing the rotating wheel and illuminating a warning light in the cockpit.
Option C. ice formation stopping the rotation of a rotary knife edge and illuminating a warning light in the cockpit.
Correct Answer is. decreased torque caused by ice formation slowing the rotating wheel and illuminating a warning light in the cockpit. OR increased torque caused by ice formation slowing the rotating wheel and illuminating a warning light in the cockpit.
Explanation. Aircraft Electrical Systems, Pallett, page 174.

Question Number. 20. Windscreen heating is supplied from.
Option A. frequency wild generator, direct to the windscreen.
Option B. DC generator, via a transformer.
Option C. frequency wild generator, via a rectifier.
Correct Answer is. frequency wild generator, direct to the windscreen.
Explanation. Aircraft Electrical Systems, Pallett, page173, fig.10-29.

Question Number. 21. A wing thermal anti-ice annunciator is illuminated permanently in flight deck without selection being made. The most probable cause would be.
Option A. a short circuit.
Option B. an open circuit.
Option C. normal.

Correct Answer is. a short circuit.
Explanation. NIL.

Question Number. 22. Air for anti-icing of the wings is obtained from.
Option A. air conditioning ducting.
Option B. engine compressors.
Option C. a combustion heater.
Correct Answer is. engine compressors.
Explanation. NIL.

Question Number. 23. The usual material for pipelines in a fluid deice system.
Option A. stainless steel.
Option B. Monel.
Option C. nylon.
Correct Answer is. nylon.
Explanation. NIL.

Question Number. 24. When operating a windscreen wiper on the ground, make sure to.

Option A. use slow wiper only.
Option B. use water as lubricant when operating.
Option C. place soft cloth between blade and window.
Correct Answer is. use water as lubricant when operating.
Explanation. CAAIPs Leaflet 6-8 para 5.1.2.

Question Number. 25. What is run-back ice?.
Option A. Glaze ice.
Option B. Rime ice.
Option C. Glime ice.
Correct Answer is. Glaze ice.
Explanation. AC20-147.

11A.13. Landing Gear (ATA 32).

Question Number. 1. Spongy brakes are usually a result of.
Option A. internal leakage.
Option B. air in the system.
Option C. external leakage.
Correct Answer is. air in the system.
Explanation. CAAIPs 5-8 Jeppesen A&P Technician Airframe Textbook Page 9-31.

Question Number. 2. Over inflated tyres may cause damage to the.
Option A. brake drum.
Option B. wheel hub.
Option C. wheel flange.
Correct Answer is. wheel flange.
Explanation. Jeppesen A&P Technician Airframe Textbook Page 1-32.

Question Number. 3. A brake debooster valve is provided for.
Option A. applying brake pressure slowly and releasing the the brakes quickly.
Option B. increasing the pressure and applying the brakes rapidly.
Option C. decreasing the pressure and slowly releasing the brakes.
Correct Answer is. applying brake pressure slowly and releasing the the brakes quickly.
Explanation. NIL. www.adtl.army.mil/cgi-bin/atdl/fm/1-509/ch10.html

Question Number. 4. Tubeless tyres are stored.
Option A. at 15 to 20 P.S.I.
Option B. horizontally maximum of four high with smallest diameter tyre on top.
Option C. vertically.
Correct Answer is. vertically.
Explanation. Jeppesen A&P Technician Airframe Textbook Page 9-47 CAIPs AL/3-18 15.1.

Question Number. 5. On a wheel bogie unit, positive camber is when the.
Option A. bottom of the wheels are closer together.
Option B. top of the wheels are closer together.
Option C. front of the wheels are closer together.
Correct Answer is. bottom of the wheels are closer together.
Explanation. Jeppesen A&P Technician Airframe Textbook Page 9-13.

Question Number. 6. A badly corroded and pitted brake disk will.
Option A. wear brake pads too quickly, and should be replaced.
Option B. be serviceable, and provide better grip.
Option C. produce a loss of fluid.
Correct Answer is. wear brake pads too quickly, and should be replaced.
Explanation. Badly corroded brakes should be replaced.

Question Number. 7. How much oxygen is in a tyre (as a maximum)?.
Option A. 5% by pressure.
Option B. 15% by volume.
Option C. 5% by volume.
Correct Answer is. 5% by volume.

Explanation. AWN 70, and JAR 25.733.

Question Number. 8. A tyre specification 32 x 10.75-14. What does the 10.75 refer to.

Option A. Section Width.
Option B. Bead diameter.
Option C. Overall diameter.
Correct Answer is. Section Width.
Explanation. CAIPs AL/3-18 3.1.

Question Number. 9. When servicing an oleo, fluid comes out of the air valve when the leg is depressurised?.
Option A. The leg is serviceable - the separator has bottomed.
Option B. Leaking air/oil seals.
Option C. Separator plate stuck open.
Correct Answer is. The leg is serviceable - the separator has bottomed.
Explanation. CAIPs AL/3-6.

Question Number. 10. The type of fluid in an oleo strut will depend upon.
Option A. type of fluid most readily available.
Option B. the type of seal material.
Option C. heat generated in operation of the system.
Correct Answer is. heat generated in operation of the system.
Explanation. The type of fluid in an oleo strut will depend upon heat generated in operation of the system.

Question Number. 11. A restrictor valve.
Option A. speed up the flow in one direction.
Option B. may be used to slow down undercarriage extension.
Option C. restrict the extent of travel of the undercarriage.
Correct Answer is. may be used to slow down undercarriage extension.
Explanation. CAIPs AL/3-6 Page 7&8.

Question Number. 12. The function of the oil in a shock absorber is to.
Option A. ensure the separator does not bottom.
Option B. damp the rebound.
Option C. absorb the landing shock.
Correct Answer is. damp the rebound.
Explanation. Jeppesen A&P technician Airframe Textbook Page 9-5.

Question Number. 13. The purpose of the flutter plate in a shock absorber is to.
Option A. permit free flow of oil during compression and restriction of oil during extension.
Option B. restrict the compression of the air.
Option C. separate the oil from the air.
Correct Answer is. permit free flow of oil during compression and restriction of oil during extension.
Explanation. NIL.

Question Number. 14. Made up wheels should be stored.
Option A. vertical at working pressure.
Option B. vertical at 20/30 PSI charge.
Option C. horizontal no more than 4 high.
Correct Answer is. vertical at 20/30 PSI charge.
Explanation. CAIPS AL3-18 para 15-1 and 15-3.

Question Number. 15. "After MLG down and securely locked, a red light is illuminated n the flight deck. The possible causes are."
Option A. shorted sensor.
Option B. out of adjustment sensor.
Option C. wiring problem.
Correct Answer is. out of adjustment sensor.
Explanation. Aircraft Electrical Systems Pallett Page 176.

Question Number. 16. When checking for alignment of a MLG, check.
Option A. symmetry, tracking, camber.
Option B. symmetry, splay, tracking.
Option C. symmetry, twist, tracking.
Correct Answer is. symmetry, tracking, camber.
Explanation. A+P Technician Airframe Textbook Page 9-13.

Question Number. 17. These markings are found on a tyre32 x 10.45 R 14.What does the number 32 mean?.
Option A. Outer diameter.
Option B. qwidth.
Option C. Inner diameter.
Correct Answer is. Outer diameter.
Explanation. CAIPs AL/3-18 3.1.

Question Number. 18. A green/grey dot marking on aircraft tyre casing represents.
Option A. breather points.
Option B. the light part of the tyre.

Option C. military reference.
Correct Answer is. breather points.
Explanation. CAIPs AL/3-18 3.6, CAAIPs Leaflet 5-7 2.4.

Question Number. 19. In detachable flange type wheels, the flange is secured by.
Option A. a retainer plate.
Option B. a lock ring.
Option C. bolts.
Correct Answer is. a lock ring.
Explanation. CAIPs AL/3-18 4.7.1.

Question Number. 20. Fuse plugs in aircraft tyres are.
Option A. for over temperature protection.
Option B. for overpressure protection.
Option C. to deflate the tyre before removal.
Correct Answer is. for overpressure protection.
Explanation. AL/3-19 3.1.2 Fuse plugs protect the tyre from explosion due to overpressure, albeit the overpressure as a result of temperature rise.

Question Number. 21. A breaker strip in an aircraft tyre is.
Option A. to provide strength.
Option B. to provide a wear indication.
Option C. to indicate the position for tyre levers.
Correct Answer is. to provide strength.
Explanation. NIL. www.dunlopaircrafttyres.com/tyrecare/dm1172/dm1172.pdf

Question Number. 22. If fluid leaks along with air whilst oleo charging, this is.
Option A. caused by a leaky seal.
Option B. normal.
Option C. due to excessive charging pressure.
Correct Answer is. caused by a leaky seal.
Explanation. AL/3-6 3.3.3 iii.

Question Number. 23. A red dot / triangle mark on aircraft tyres means.
Option A. military reference.
Option B. the light part of the tyre.
Option C. breather points.
Correct Answer is. the light part of the tyre.
Explanation. CAIPs AL/3-18 3.6, CAAIPs Leaflet 5-7 3.7.

Question Number. 24. On selection of MLG down, the gear extends then begins to retract again. The cause is.
Option A. a faulty selector valve.
Option B. a faulty actuator.
Option C. gear lowered at too high an airspeed.
Correct Answer is. a faulty selector valve.
Explanation. NIL.

Question Number. 25. When fitting a tyre, the red dot should be positioned.
Option A. on the other side of the wheel opposite to the charging valve.
Option B. opposite the charging valve.
Option C. adjacent to the charging valve.
Correct Answer is. adjacent to the charging valve.
Explanation. Dunlop Aircraft Tyres General Servicing Instructions Para 3.2.1.10.

Question Number. 26. Composite brake units.
Option A. weigh the same as normal brake units and fade away athigh temperatures.
Option B. have less weight than normal brake units but fade away at high temperatures.
Option C. have less weight than normal brake units and have increased efficiency at high temperatures.
Correct Answer is. have less weight than normal brake units and have increased efficiency at high temperatures.
Explanation. A&P Technician Airframe Textbook Page 9-20 'Carbon Brakes'.

Question Number. 27. A restrictor valve can be used.
Option A. to increase the speed of undercarriage retraction.
Option B. to increase the speed of the undercarriage extension.
Option C. to reduce the speed of the undercarriage extension.
Correct Answer is. to reduce the speed of the undercarriage extension.
Explanation. CAIPs AL/3-6 4.2.

Question Number. 28. When an undercarriage is lowered, it tends to creep back up. The fault could be.
Option A. the emergency system.
Option B. a leaky selector valve.
Option C. a stuck relief valve.
Correct Answer is. a leaky selector valve.
Explanation. NIL.

Question Number. 29. Vents holes are found on.
Option A. tubeless tyres.

Option B. tubed tyres.
Option C. tubed and tubeless tyres.
Correct Answer is. tubed and tubeless tyres.
Explanation. AL/3-18 2.4. A&P Technician Airframe Textbook Page 9-42 says both tubed and tubeless. So does Dunlop General Servicing Instructions.

Question Number. 30. At what temperature does a yellow fuse plug melt at?.
Option A. 150°C.
Option B. 250°C.
Option C. 200°C.
Correct Answer is. 200°C.
Explanation. Boeing 757 Carbon Brake wheel, Description and Operation 32-42-82 Part AHA1648 - Yellow Plug Temperature 390°F.

Question Number. 31. The cam plate in a nose undercarriage is.
Option A. part of the shimmy damper.
Option B. to align for nose wheel on nose undercarriage retraction.
Option C. for alignment of the nose wheel steering on nose undercarriage extension.
Correct Answer is. to align for nose wheel on nose undercarriage retraction.
Explanation. NIL.

Question Number. 32. What is tyre creep related to?.
Option A. Horizontal movement of the tyre.
Option B. Vertical movement of the tyre.
Option C. Tyre moving around the wheel.
Correct Answer is. Tyre moving around the wheel.
Explanation. Leaflet 5-7 Para 9

Question Number. 33. Aquaplaning' can be reduced by.
Option A. increased flaring.
Option B. lowering slats.
Option C. an anti-skid device.
Correct Answer is. an anti-skid device.
Explanation. NIL.

Question Number. 34. .Why is a hydraulic damper fitted to a nose wheel steering system?.
Option A. To reduce vibration and shimmy.
Option B. To centralise the nose wheel during an up selection.
Option C. To centralise the nose leg assembly during an up selection.
Correct Answer is. To reduce vibration and shimmy.

Explanation. NIL.

Question Number. 35. What decides the type of oil used in an undercarriage leg?.
Option A. The material of the leg.
Option B. The types of seals the leg uses.
Option C. Neither, any oil can be used.
Correct Answer is. The types of seals the leg uses.
Explanation. NIL.

Question Number. 36. In an anti-skid system.
Option A. brakes are modulated to give most efficient braking.
Option B. brakes release on rising torque.
Option C. brakes release on falling torque.
Correct Answer is. brakes are modulated to give most efficient braking.
Explanation. Jeppesen A&P Technician Airframe Textbook Page 10-37.

Question Number. 37. If an undercarriage oleo has insufficient deflection, the likely cause is.
Option A. oil level too high.
Option B. loss of pressure/leakage.
Option C. air pressure too high.
Correct Answer is. air pressure too high.
Explanation. NIL.

Question Number. 38. A Maxaret is used in what system?.
Option A. Tyre inflation.
Option B. Skid control.
Option C. Self centring landing gear.
Correct Answer is. Skid control.
Explanation. NIL.

Question Number. 39. 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.
Option A. the airspeed is too high.
Option B. the landing gear is not locked down.
Option C. the rate of descent is too high.
Correct Answer is. the landing gear is not locked down.
Explanation. Jeppesen A & P Airframe Technician Textbook page 10-12.

Question Number. 40. A restrictor in the landing gear hydraulic retraction and lowering

system is positioned in the.
Option A. landing gear up line.
Option B. landing gear down line.
Option C. return line from the landing gear selector.
Correct Answer is. landing gear up line.
Explanation. The restrictor is placed in the retraction line to slow the rate of exit of fluid from the jack on extension, to slow the rate of extension. CAIPs AL/3-6 fig 4 sows them in the down line - this is a well known error in CAIPs.

Question Number. 41. Wheel speed information is used in auto speed brake systems.

Option A. to stow the spoilers automatically when the aircraft has nearly stopped.
Option B. to ensure the aircraft has touched down and to give a slight time lapse before spoiler deployment.
Option C. to ensure the aircraft is still rolling.
Correct Answer is. to ensure the aircraft has touched down and to give a slight time lapse before spoiler deployment.
Explanation. NIL.

Question Number. 42. A fusible plug fitted to an aircraft wheel prevents.
Option A. over inflation of tyres during servicing.
Option B. brakes seizure, if brake stators and rotors weld together under excessive temperatures.
Option C. tyre bursts due to high temperatures created by excessive braking.
Correct Answer is. tyre bursts due to high temperatures created by excessive braking.
Explanation. CAAIPs Leaflet 5-8 para 3.1.3 and A&P Technician Airframe Textbook 9-6.

Question Number. 43. If the shuttle valve was stuck in the normal position.
Option A. neither system will be available.
Option B. emergency braking will not be available.
Option C. normal braking will not be available.
Correct Answer is. emergency braking will not be available.
Explanation. NIL.

Question Number. 44. The breaker strip of a tyre is fitted.
Option A. between the apex strip and the casing piles.
Option B. between the bead and the casing piles.
Option C. between the tread rubber and the casing piles.
Correct Answer is. between the tread rubber and the casing piles.
Explanation. CAAIP Leaflet 5-7 fig 1.

Question Number. 45. Nose wheel steering in a modern aircraft is by.
Option A. rudder pedals.
Option B. the control column.
Option C. a separate pilot operated control.
Correct Answer is. a separate pilot operated control.
Explanation. NIL.

Question Number. 46. The fusible plugs installed in some aircraft wheel will.
Option A. facilitate servicing of the wheel assembly.
Option B. melt at a specified elevated temperature.
Option C. eliminate the need to check air pressure
Correct Answer is. melt at a specified elevated temperature.
Explanation. NIL.

Question Number. 47. Excessive wear in the shoulder area of an aircraft tyre is an indication of.
Option A. under-inflation.
Option B. over-inflation.
Option C. excessive toe-in.
Correct Answer is. under-inflation.
Explanation. NIL.

Question Number. 48. Ribbed tyres with marker tie bars may be worn to.
Option A. the top of the tie bar.
Option B. the base of the tie bar.
Option C. 1 mm from the rib base.
Correct Answer is. the top of the tie bar.
Explanation. NIL.

Question Number. 49. On large aircraft, bogie type undercarriages are used to.
Option A. spread the weight over a large area.
Option B. absorb increased landing shock.
Option C. prevent skidding.
Correct Answer is. spread the weight over a large area.
Explanation. NIL.

Question Number. 50. To position the bogie beam at a suitable angle for retraction and landing, a.
Option A. castoring damper is used.
Option B. snubber is used.
Option C. hop damper is used.

Correct Answer is. hop damper is used.
Explanation. NIL.

Question Number. 51. On large aircraft, braked wheel assemblies are normally inflated with.
Option A. nitrogen.
Option B. an argon and CO2 mixture.
Option C. nitrogen and not more than 5% of air.
Correct Answer is. nitrogen and not more than 5% of air.
Explanation. JAR 25.733 (e).

Question Number. 52. Brake deboosters.
Option A. increase the hydraulic pressure entering the brakes.
Option B. reduce the hydraulic pressure entering the brakes.
Option C. assist the operation of the anti-skid unit.
Correct Answer is. reduce the hydraulic pressure entering the brakes.
Explanation. NIL.

Question Number. 53. A modulator is fitted in conjunction with.
Option A. brake control valves.
Option B. non-return valve.
Option C. anti-skid units.
Correct Answer is. anti-skid units.
Explanation. AL/3-21 6.6.

Question Number. 54. In the case of pressurized aircraft, the nose-wheel bay.
Option A. is pressurized to a value higher than ambient but less than cabin pressure.
Option B. is subject to cabin pressure.
Option C. is not pressurized.
Correct Answer is. is not pressurized.
Explanation. NIL.

Question Number. 55. An undercarriage that has the axle mounted directly onto the shock absorber is of which type.
Option A. Articulated.
Option B. Hydro Mechanical.
Option C. Direct Acting.
Correct Answer is. Direct Acting.
Explanation. NIL.

Question Number. 56. The minimum aquaplaning ground speed is.
Option A. 9.6 times the root square of the tyre pressure in psi.
Option B. 8.6 times the root square of the tyre pressure in psi.
Option C. 8.6 times the tyre pressure in bar.
Correct Answer is. 8.6 times the root square of the tyre pressure in psi.
Explanation. http://www.gremline.com/page13.html

Question Number. 57. Tubed tyres are stored.
Option A. horizontally, up to 4 in total staggering them to prevent distortion of beads.
Option B. horizontally, up to 4 in total in a rack with supporting tubes so each tyre is supported at 2 points.
Option C. horizontally, up to 4 in total with the smallest at the top.
Correct Answer is. horizontally, up to 4 in total in a rack with supporting tubes so each tyre is supported at 2 points.
Explanation. CAAIPs Leaflet 5-7 15.2.1 and 15.2.2.

Question Number. 58. On a main landing gear, what is positive camber?.
Option A. Top of wheels closer to fuselage.
Option B. Front of wheels closer to fuselage.
Option C. Bottom of wheels closer to fuselage.
Correct Answer is. Bottom of wheels closer to fuselage.
Explanation. http://www.desertrides.com/reference/terms.php#C

Question Number. 59. When the landing gear is locked up, the cockpit indicator shows.

Option A. red light.
Option B. no indication.
Option C. green light.
Correct Answer is. no indication.
Explanation. Jeppesen A & P Airframe Technician Textbook page 10-12.

Question Number. 60. When checking the alignment of a main landing gear, check.

Option A. symmetry, tracking, camber.
Option B. symmetry, tracking, twist.
Option C. symmetry, tracking, splay.
Correct Answer is. symmetry, tracking, camber.
Explanation. NIL.

Question Number. 61. Tyre creep could be caused by.
Option A. overpressure.

Option B. excessive wear.
Option C. under pressure.
Correct Answer is. under pressure.
Explanation. NIL.

Question Number. 62. When inflating a tyre and you notice ice in the valve stem.
Option A. heat the valve stem gently with a blow torch.
Option B. wait for ice to melt before carrying on with inflation.
Option C. carry on inflating as ice in the valve stem is no problem.
Correct Answer is. wait for ice to melt before carrying on with inflation.
Explanation. NIL.

Question Number. 63. A method of helping to prevent aquaplaning is by fitting tyres which have.
Option A. water dispersing treads.
Option B. a plain tread.
Option C. twin contact.
Correct Answer is. water dispersing treads.
Explanation. NIL.

Question Number. 64. Un-mounted tubeless tyres must be stored.
Option A. vertically.
Option B. horizontally.
Option C. in the manufactures boxes.
Correct Answer is. vertically.
Explanation. AL/3-18 15.1.

Question Number. 65. With a single oleo leg with a stub axle used, the torque links will.

Option A. keep the wheel in track.
Option B. assist the wheel to castor.
Option C. allow the wheel to shimmy.
Correct Answer is. keep the wheel in track.
Explanation. Jeppesen A & P Airframe Technician textbook page 9-12.

Question Number. 66. When fitting a tyre to a hub, the red spot on the tyre should be in line with.
Option A. maker's serial number.
Option B. the valve assembly.
Option C. opposite side to the valve assembly.
Correct Answer is. the valve assembly.

Explanation. Jeppesen A & P Airframe Technician Textbook page 9-49.

Question Number. 67. A red or yellow line on an inner tube would indicate.
Option A. light spot.
Option B. balance indicator.
Option C. heavy spot.
Correct Answer is. heavy spot.
Explanation. NIL.

Question Number. 68. On a multi-brake unit with automatic adjusters, brake wear is checked by.
Option A. using a go-no go gauge to measure the gap between the cylinder and the thrust plate.
Option B. application of the brakes and checking indicator pin protrusion.
Option C. measuring the protrusion of the indicator pins with the brakes released.
Correct Answer is. application of the brakes and checking indicator pin protrusion.
Explanation. Dunlop component maintenance manual Ch. 32-42-98.

11A.14. Lights (ATA 33).

Question Number. 1. With aircraft lights - which of the following is true?.
Option A. Starboard light green, port light red, tail light white.
Option B. Starboard light red, port light green, tail light Red.
Option C. Starboard light red, port light green, tail light White.
Correct Answer is. Starboard light green, port light red, tail light white.
Explanation. Pallett Aircraft Electrical Systems 3rd Edition Page 145.

Question Number. 2. Emergency floor lighting system is inoperative, then.
Option A. the aircraft is not allowed to fly until repaired.
Option B. the aircraft is allowed to fly in daylight conditions only.
Option C. the aircraft is allowed to fly empty to a main base.
Correct Answer is. the aircraft is allowed to fly empty to a main base.
Explanation. Can fly without passengers in accordance with the MEL. No reference found.

Question Number. 3. A fluorescent tube contains.
Option A. orange coatings, rare gases and mercury vapour.
Option B. phosphor coatings, rare gases and mercury vapour.
Option C. iodine coatings and rare gases.
Correct Answer is. phosphor coatings, rare gases and mercury vapour.
Explanation. http://www.users.mis.net/~pthrush/lighting/flour.html

Question Number. 4. A white steady light is required.
Option A. of at least 3 candelas, at the rear of the aircraft 70 degrees either side of dead astern.
Option B. of at least 3 lumens, at the rear of the aircraft 110 degrees either side of dead astern.
Option C. of at least 3 candelas, at the rear of the aircraft 110 degrees either side of dead astern.
Correct Answer is. of at least 3 candelas, at the rear of the aircraft 70 degrees either side of dead astern.
Explanation. CAP 393 Rules of the Air Rule 11 (2) (a) (iii).

Question Number. 5. How many floor path lights can you fly with unserviceable?.

Option A. 15%.
Option B. 25%.
Option C. 20%.
Correct Answer is. 25%.
Explanation. AWN 56 2.11.

Question Number. 6. What is the arc of a landing light?.
Option A. 15°.
Option B. 11°.
Option C. 20°.
Correct Answer is. 11°.
Explanation. Pallett Aircraft Electrical Systems 3rd Edition Page 146 Fig 10-1.

Question Number. 7. The visible angle of a white tail navigation light is.
Option A. 11°.
Option B. 140°.
Option C. 110°.
Correct Answer is. 140°.
Explanation. Pallett Aircraft Electrical Systems 3rd Edition Page 146, and JAR 25.1387.

Question Number. 8. Wing navigation lights must be visible through which angle?.

Option A. 110°.
Option B. 125°.
Option C. 180°.
Correct Answer is. 110°.
Explanation. Aircraft Electrical Systems Pallett Page 146, and JAR 25.1387, and EEL/1-10 301 a).

Question Number. 9. Cockpit dome lighting is provided by the.
Option A. battery bus and ground services bus.
Option B. battery bus.
Option C. ground services bus.
Correct Answer is. battery bus and ground services bus.
Explanation. Aircraft Electricity and Electronics, Eismin 5th edition page 256.

Question Number. 10. Upper and lower strobe lights are coloured.
Option A. green.
Option B. red.
Option C. white.
Correct Answer is. red.
Explanation. Transport Category Aircraft Systems Jeppesen Page 7-2.

Question Number. 11. Cargo bay lights on a modern aircraft are supplied by.
Option A. AC handling bus.
Option B. DC handling bus.
Option C. the battery bus.
Correct Answer is. AC handling bus.
Explanation. BAe 146 AMM (AC ground service busbar) although other aircraft (A340, B747) use 28VDC ground bus.

Question Number. 12. What will happen if the Master Dim and test switch is switched to the on position?.
Option A. Rectangular indicator lights will illuminate.
Option B. All lights will illuminate.
Option C. Dome lights will illuminate.
Correct Answer is. Rectangular indicator lights will illuminate.
Explanation. NIL.

Question Number. 13. Escape route lighting must not have more than.
Option A. 20% obscured.
Option B. 10% obscured.
Option C. 15% obscured.
Correct Answer is. 20% obscured.
Explanation. NIL.

Question Number. 14. How many emergency lights are allowed to be inoperative?.

Option A. 25%.
Option B. 10%.
Option C. None.
Correct Answer is. 25%.
Explanation. JAR 25.812 (l) (1), and CAAIPs Leaflet 5-11 2.11.1.

Question Number. 15. The angle of a runway turnoff light is.
Option A. 40°.
Option B. 60°.
Option C. 50°.
Correct Answer is. 50°.
Explanation. Aircraft Electrical Systems Pallett Page 146.

Question Number. 16. Cabin fluorescent lighting circuits are supplied with.
Option A. 28 V DC.
Option B. 115 V AC.
Option C. 28 V AC.
Correct Answer is. 115 V AC.
Explanation. Jeppesen A&P Technician Airframe Textbook Page 7-76 (figure 7-115).

Question Number. 17. How are passenger reading lights normally tested?.
Option A. Each one is switched on individually at passenger panel.
Option B. By using a READ LIGHT TEST switch at any passenger panel.
Option C. By using a READ LIGHT TEST switch on the cabin attendant panel.
Correct Answer is. Each one is switched on individually at passenger panel.
Explanation. NIL.

Question Number. 18. In what position should the selector switch be for a standby and emergency lighting system during flight.
Option A. Armed.
Option B. OFF.
Option C. ON.
Correct Answer is. Armed.
Explanation. Transport Category Aircraft Systems 11-23.

Question Number. 19. The emergency lighting system must be designed so that after any single transverse vertical separation of the fuselage during crash landing the maximum amount of emergency lighting that fails is.
Option A. 15%.
Option B. 10%.
Option C. 25%.

Correct Answer is. 25%.
Explanation. JAR 25.812.

Question Number. 20. A rotating beacon must have a minimum light rating of.
Option A. 100 candelas.
Option B. 50 candelas.
Option C. 20 candelas.
Correct Answer is. 20 candelas.
Explanation. CAP 393 Section 2 Rules of the Air Para. 11 (2) (d).

Question Number. 21. Service lights include.
Option A. refuelling lights, engine scanning lights, logo lights.
Option B. avionics bay lights, engine scanning lights, baggage compartment lights.
Option C. baggage compartment lights, avionics bay lights, refuelling lights.
Correct Answer is. baggage compartment lights, avionics bay lights, refuelling lights.
Explanation. EEL/1-10 3.5.

Question Number. 22. If the 'blow-back' device on a landing lamp operates, how is it reset?.
Option A. The linkage must be repositioned and latched when the aircraft is on the ground.
Option B. Select full 'RETRACT'.
Option C. It cannot. The unit must be replaced because of the high stress loads experienced.
Correct Answer is. Select full 'RETRACT'.
Explanation. EEL/1-10 3.3.1.

Question Number. 23. Before touching or disconnecting a strobe light head, a time period must elapse to avoid electrical shock or burning. That time period is at least.
Option A. 2 minutes.
Option B. 5 minutes.
Option C. 1 minute.
Correct Answer is. 2 minutes.
Explanation. EEL/1-10 5.5.

Question Number. 24. The rear light of an aircraft must be white and, in addition, must show through an inclusive angle of.
Option A. 110 degrees and be 5 candelas minimum.
Option B. 110 degrees and be 40 candelas minimum.
Option C. 140 degrees and be 3 candelas minimum.
Correct Answer is. 140 degrees and be 3 candelas minimum.
Explanation. CAP 393 Section 2 Rules of the Air Para 2 a iii and CAIPs EEL/1-10 3.1 c).

Question Number. 25. Self-illuminating signs.
Option A. are instantly seen in dark areas by persons who are not dark adapted.
Option B. require a period of daylight, or intense artificial light to operate.
Option C. are self powered and contain phosphor and helium gas.
Correct Answer is. are instantly seen in dark areas by persons who are not dark adapted.
Explanation. EEL/1-10 4.8.

Question Number. 26. When an annunciator light is selected to 'DIM', the resistor is in.

Option A. parallel with the light and the transistor is not conducting.
Option B. series with the light and the transistor is not conducting.
Option C. series with the light and the transistor is conducting.
Correct Answer is. series with the light and the transistor is conducting.
Explanation. The transistor is conducting all the time the light is switched on. Pallett - Aircraft Electrical Systems. Page 153.

Question Number. 27. Storm lights are usually fluorescent lights that are switched on.

Option A. because lightning has less effect on fluorescent lamp units.
Option B. and the glare-shield lights are automatically dimmed.
Option C. to reduce the effect of lightning on the pilot's sight.
Correct Answer is. to reduce the effect of lightning on the pilot's sight.
Explanation. NIL. http://www.flightsim.com/cgi/kds?$=main/special/real777

Question Number. 28. Captain and First Officer's 'Dome' lights can be dimmed.
Option A. individually - they are wired in parallel.
Option B. together - they are wired in series.
Option C. First Officer's only in emergency mode.
Correct Answer is. together - they are wired in series.
Explanation. Pallett - Aircraft Electrical Systems. Page 153.

Question Number. 29. In the CWS system, the caution light is coloured.
Option A. red.
Option B. amber.
Option C. green.
Correct Answer is. amber.
Explanation. CAIPs EEL/1-10 4.4.1.

Question Number. 30. On a CWS, which has the highest priority?.
Option A. Fire warning.

Option B. Hydraulic pump failure.
Option C. Duct overheat.
Correct Answer is. Fire warning.
Explanation. NIL.

Question Number. 31. What inert gas is used in a typical strobe light?.
Option A. Freon.
Option B. Halon.
Option C. Xenon.
Correct Answer is. Xenon.
Explanation. NIL.

Question Number. 32. Floor proximity lighting is a mandatory requirement and each light should be spaced.
Option A. at 60 inch intervals.
Option B. at 70 inch intervals.
Option C. at 40 inch intervals.
Correct Answer is. at 40 inch intervals.
Explanation. CAAIPs Leaflet 5-11 2.7.1.

Question Number. 33. Tritium Gas is used in a.
Option A. strobe light.
Option B. landing Light.
Option C. self illuminating lights.
Correct Answer is. self illuminating lights.
Explanation. EEL/1-10 4.8.1.

Question Number. 34. A strobe light is a light unit that takes form of glass tube filled with which gas and its light colour is what?.
Option A. Xenon Gas and blue-white.
Option B. Helium gas and white.
Option C. Neon gas and blue.
Correct Answer is. Xenon Gas and blue-white.
Explanation. EEL/1-10 3.2.3.

Question Number. 35. The aircraft has a partial failure of its emergency lighting system.

Option A. continue with reduced passenger load.
Option B. ferry flight to main base for rectification.
Option C. ground the aircraft.
Correct Answer is. continue with reduced passenger load.

Explanation. A club66 user who got this question, queried it with the CAA. He was told (by the CAA assessor)that the answer is b. However, no reference has been found.

Question Number. 36. Navigation lights are supplied by the following circuit.
Option A. Dual circuit.
Option B. Single circuit.
Option C. Individual circuits.
Correct Answer is. Single circuit.
Explanation. Aircraft Electricity and Electronics Eismin Page 250.

Question Number. 37. Automatic no smoking sign will illuminate.
Option A. below 10,000ft and descending.
Option B. when landing gear doors are not closed.
Option C. when landing gear is up.
Correct Answer is. below 10,000ft and descending.
Explanation. NIL.

11A.15. Oxygen (ATA 35).

Question Number. 1. Anoxia is due to.
Option A. lack of oxygen.
Option B. low air pressure on the body.
Option C. release of nitrogen bubbles in the blood.
Correct Answer is. lack of oxygen.
Explanation. CAAIPs Leaflet 5-9 Para 2.1.

Question Number. 2. The dilutor demand regulator functions.
Option A. all the time.
Option B. only when the supply valve is opened by the user.
Option C. when the user breathes in.
Correct Answer is. when the user breathes in.
Explanation. Jeppesen A&P Technician Airframe Textbook Page 14-10.

Question Number. 3. To measure moisture in an oxygen system use.
Option A. a glass plate.
Option B. litmus paper.
Option C. a hygrometer using the dew point method.
Correct Answer is. a hygrometer using the dew point method.
Explanation. CAIPs AL/3-25 Para 6.4.

Question Number. 4. Oxygen cylinder test dates.
Option A. are painted in white on the cylinder.
Option B. are variable depending on discharge.
Option C. may be stencilled on the neck of the cylinder.
Correct Answer is. are painted in white on the cylinder.
Explanation. CAIPs AL/3-25 para 4.2.2.

Question Number. 5. 02 system pressure has leaked away after charging. What is the most probable cause?.
Option A. Supernumerator regular.
Option B. Temperature compensator.
Option C. Breathing regulator.
Correct Answer is. Breathing regulator.
Explanation. NIL.

Question Number. 6. If an O2 system is leaking, where would you most likely find the cause?.
Option A. Thermal Relief Valve.
Option B. Loose connection.
Option C. Breathing mask.
Correct Answer is. Loose connection.
Explanation. No TRV on O2 system. Breathing mask will only leak if system is turned on.

Question Number. 7. As the cabin altitude reaches 3042 metres.
Option A. the 02 masks deploy automatically and the crew activates the system from the emergency panel.
Option B. the 02 masks deploy automatically and hang half way extended.
Option C. the 02 masks deploy automatically and the crew must activate the system from the cockpit.
Correct Answer is. the 02 masks deploy automatically and hang half way extended.
Explanation.

Question Number. 8. Oxygen cylinders are normally fitted with.
Option A. pressure and quantity gauges.
Option B. oxygen purity gauge.
Option C. temperature gauge.
Correct Answer is. pressure and quantity gauges.
Explanation. CAAIPs Leaflet 5-9 p9 para 4.9.

Question Number. 9. A demand regulator in a portable oxygen bottle opens.
Option A. all the time.

Option B. when breathing.
Option C. when 100% selected.
Correct Answer is. when breathing.
Explanation. A&P Technician Airframe Textbook 14-9.

Question Number. 10. Portable oxygen bottles are fitted with.
Option A. a demand regulator.
Option B. an overpressure indicator.
Option C. an over temperature indicator.
Correct Answer is. a demand regulator.
Explanation. NIL.

Question Number. 11. American made crew oxygen cylinders are.
Option A. black in colour with a RH thread.
Option B. green in colour with a LH thread.
Option C. green in colour with a RH thread.
Correct Answer is. green in colour with a RH thread.
Explanation. CAAIP\'s Leaflet 5-9 p7 para 4.2.3 states green for cylinders for American origin. (l/h threads are for charging points).

Question Number. 12. Which connector has a left hand thread?.
Option A. N2.
Option B. Freon.
Option C. O2.
Correct Answer is. O2.
Explanation. CAAIP Leaflet 5-9 para 5.13.3(e).

Question Number. 13. What is the principle of an O2 generator?.
Option A. Sodium chlorate and iron mixed by an electronic detonator.
Option B. Sodium chlorate and iron using a mechanical detonator producing O2 when mixed with air.
Option C. Sodium chloride and iron mixed by an electronic detonator.
Correct Answer is. Sodium chlorate and iron mixed by an electronic detonator.
Explanation. CAIPs AL/3-25 3.5.1.

Question Number. 14. What pressure are oxygen cylinders usually pressurised to?.
Option A. 300 PSI.
Option B. 1800 PSI.
Option C. 3000 PSI.
Correct Answer is. 1800 PSI.
Explanation. AL/3-25 4.2, and CAAIPs Leaflet 5-9 3.3.1 and A&P Technician Airframe

Textbook 14-8.

Question Number. 15. Oxygen storage cylinders, once charged should be.
Option A. turned on by crew.
Option B. turned off.
Option C. turned on and safety wire-locked.
Correct Answer is. turned on and safety wire-locked.
Explanation. NIL.

Question Number. 16. A thermal compensator is used in.
Option A. a fuel system.
Option B. an oxygen system.
Option C. an hydraulic system.
Correct Answer is. an oxygen system.
Explanation. CAIPs AL/3-25 4.12.

Question Number. 17. When charging an oxygen bottle with gaseous oxygen, the oxygen is.
Option A. passed into the bottle slowly to keep the temperature at approximately ambient.
Option B. passed into the bottle at any rate as this does not affect temperature.
Option C. passed into the bottle as quickly as possible to keep the temperature down.
Correct Answer is. passed into the bottle slowly to keep the temperature at approximately ambient.
Explanation. A&P Mechanic Airframe Handbook Page 598.

Question Number. 18. Where are the left handed threads found in an oxygen system?.

Option A. Line valve.
Option B. Shut-off valve.
Option C. Charging connection.
Correct Answer is. Charging connection.
Explanation. CAAIP Leaflet 5-9 para 5.13.3(e).

Question Number. 19. Portable O2 diluter demand valve works when.
Option A. the user breathes in.
Option B. 100% is selected.
Option C. less than 500 psi is in bottle.
Correct Answer is. the user breathes in.
Explanation. A&P Technician Airframe Textbook 14-9.

Question Number. 20. A double headed oxygen pressure regulator is used for.
Option A. additional flightcrew.
Option B. changes in altitude.
Option C. extra supply in case of emergency.
Correct Answer is. additional flightcrew.
Explanation. NIL.

Question Number. 21. If an aircraft suddenly drops pressure at 14, 000 ft.
Option A. passenger must get mask from overhead stowage.
Option B. masks drop automatically.
Option C. attendant must drop masks.
Correct Answer is. masks drop automatically.
Explanation. Transport Category Aircraft Systems 8-8.

Question Number. 22. How do oxygen cylinders show over pressure?.
Option A. Green rupturing disc.
Option B. Audible warning.
Option C. Red rupturing disc.
Correct Answer is. Green rupturing disc.
Explanation. AL/3-25 4.13.

Question Number. 23. The life of an aircraft oxygen cylinder is.
Option A. 2 years.
Option B. 10 years.
Option C. 5 years.
Correct Answer is. 5 years.
Explanation. Jeppesen A & P Technician Airframe Textbook page 14-8 or CAAIP\'s Leaflet 5-9 p16.

Question Number. 24. A discharged chemical generator is indicated by.
Option A. a protruding pin.
Option B. a change in colour.
Option C. a broken tell-tale wire.
Correct Answer is. a change in colour.
Explanation. AL/3-25.

Question Number. 25. A chemical oxygen generator has a supply duration of at least.

Option A. 15 minutes.
Option B. 30 minutes.
Option C. 5 minutes.

Correct Answer is. 15 minutes.
Explanation. AL/3-25, and A&P Technician Airframe Textbook 14-8 and CAAIPs Leaflet 5-9 3.6.3 and JAR 25.1439.

Question Number. 26. The oxygen line service valve must be.
Option A. wire locked open.
Option B. wire locked closed.
Option C. only be wire locked with telltale wire.
Correct Answer is. wire locked open.
Explanation. AL/3-25.

Question Number. 27. Oxygen equipment must be carried by aircraft capable of flying above.
Option A. 4,000 ft.
Option B. 10,000ft.
Option C. 8,000ft.
Correct Answer is. 10,000ft.
Explanation. AL/3-25 3.1.

Question Number. 28. The critical altitude for oxygen requirement is approximately.

Option A. 38,000 ft.
Option B. 25,000 ft.
Option C. 4,000 ft.
Correct Answer is. 25,000 ft.
Explanation. AL/3-25 Table 1.

Question Number. 29. If oxygen is not being supplied in normal flight conditions, the cabin altitude must be.
Option A. at a maximum of 12,000 ft.
Option B. at or below 8,000 ft.
Option C. below 10,000 ft.
Correct Answer is. at or below 8,000 ft.
Explanation. CAIPs AL/3-23.

Question Number. 30. Pressure breathing systems must be used at altitudes.
Option A. above 40,000 ft.
Option B. below 40,000 ft.
Option C. above 30,000 ft.
Correct Answer is. above 40,000 ft.
Explanation. AL/3-25 table 1.

Question Number. 31. In a diluter demand oxygen system.
Option A. oxygen is supplied with a continuous pressure flow.
Option B. each member of the crew has a continuous oxygen supply.
Option C. each member of the crew has a regulator.
Correct Answer is. each member of the crew has a regulator.
Explanation. AL/3-25 fig 3.

Question Number. 32. In a continuous flow oxygen system, oxygen is supplied.
Option A. only when the supply has been regulated by the pilot.
Option B. on passenger inhaling into the mask.
Option C. when the mask is plugged into the socket.
Correct Answer is. only when the supply has been regulated by the pilot.
Explanation. NIL.

Question Number. 33. In the diluter demand oxygen system, selection of emergency on this regulator will result in.
Option A. 100% oxygen at positive pressure.
Option B. 100% oxygen continuous flow at positive pressure.
Option C. 100% oxygen supply as the user inhales.
Correct Answer is. 100% oxygen continuous flow at positive pressure.
Explanation. CAAIP\'s Leaflet 5-9 p8 para 4.7 ©.

Question Number. 34. The cylinder of a portable oxygen set is made of.
Option A. aluminium.
Option B. stainless steel.
Option C. alloy steel.
Correct Answer is. alloy steel.
Explanation. AL/3-25 3.6.

Question Number. 35. Portable oxygen cylinders are normally charged to.
Option A. 1,800 p.s.i.
Option B. 2,000 p.s.i.
Option C. 1,200 p.s.i.
Correct Answer is. 1,800 p.s.i.
Explanation. AL/3-25 3.6.

Question Number. 36. Rate of flow of oxygen is given in.
Option A. pounds/minute.
Option B. litres/pounds.

Option C. litres/minute.
Correct Answer is. litres/minute.
Explanation. NIL.

Question Number. 37. Oxygen cylinders are removed for overhaul and tested.
Option A. every 3 years.
Option B. every 6 years.
Option C. every 4 years.
Correct Answer is. every 4 years.
Explanation. AL/3-25 5.8.

Question Number. 38. Oxygen bottle capacity varies between.
Option A. 80 2250 litres.
Option B. 100 3200 litres.
Option C. 200 2250 litres.
Correct Answer is. 80 2250 litres.
Explanation. AL/3-25 4.2.

Question Number. 39. Oxygen bottle test and working pressures can be found.
Option A. stamped on a metal label.
Option B. stencilled on the bottle.
Option C. stamped on the neck ring.
Correct Answer is. stamped on the neck ring.
Explanation. AL/3-25 4.2.2 and Leaflet 5-9 5.9.

Question Number. 40. After installation, the oxygen bottle on/off valve is.
Option A. left in the 'on' position.
Option B. left in the 'off' position until required.
Option C. wire locked in the 'on'.
Correct Answer is. wire locked in the 'on'.
Explanation. CAAIP\'s Leaflet 5-9 para 5.6.2 (h).

Question Number. 41. Dangerous pressure rise in oxygen cylinders.
Option A. is relieved by a bursting disc.
Option B. is relieved by a thermostat.
Option C. is relieved by under pressurising the bottle.
Correct Answer is. is relieved by a bursting disc.
Explanation. AL/3-25 4.13.

Question Number. 42. To avoid condensation forming in an oxygen cylinder.

Option A. cylinder pressure is left at 300/400 p.s.i.
Option B. cylinder pressure is left at 100/200 p.s.i.
Option C. cylinder pressure is left at 200/300 p.s.i.
Correct Answer is. cylinder pressure is left at 200/300 p.s.i.
Explanation. AL/3-25 5.5.1 ii).

Question Number. 43. What determines the material used for oxygen pipe lines?.
Option A. The whims of the aircraft designer.
Option B. The length of the pipe runs.
Option C. The pressure used in the system.
Correct Answer is. The pressure used in the system.
Explanation. AL/3-25 4.3.

Question Number. 44. The direction of flow in an oxygen non return valve is indicated.

Option A. by visual inspection.
Option B. by colour coding.
Option C. by an arrow.
Correct Answer is. by an arrow.
Explanation. AL/3-25 Page 8.

Question Number. 45. Oxygen filters are made of.
Option A. carbon fibres.
Option B. steel wool.
Option C. sintered bronze.
Correct Answer is. sintered bronze.
Explanation. AL/3-25 Page 8.

Question Number. 46. Satisfactory operation of the oxygen systems is indicated by.

Option A. flow indicators.
Option B. pressure indicators.
Option C. lack of Anoxia.
Correct Answer is. flow indicators.
Explanation. CAAIP's Leaflet 5-9 p9 para 4.11.

Question Number. 47. If a binding thread needs attention on an oxygen system.
Option A. Teflon tape may be used.
Option B. distilled water may be used sparingly.
Option C. no lubricant may be used whatsoever.
Correct Answer is. Teflon tape may be used.

Explanation. NIL.

Question Number. 48. The international marking for a breathing oxygen pipeline is a series of.
Option A. diamonds.
Option B. dots.
Option C. rectangles.
Correct Answer is. rectangles.
Explanation. NIL.

Question Number. 49. Cylinders containing purified oxygen for breathing are painted.

Option A. black with a white collar.
Option B. black.
Option C. white with a black collar.
Correct Answer is. black with a white collar.
Explanation. ZAL/3-25 4.2.2.

Question Number. 50. A suitable leak detecting solution for use on oxygen systems is.

Option A. leak testing solution to Spec. MIL-L-25567B.
Option B. soapy water.
Option C. grease free medical soap.
Correct Answer is. leak testing solution to Spec. MIL-L-25567B.
Explanation. AL/3-25 5.7.1, AL/3-21 3. http://www.chemsol.com/chemsol/lubricants.html

Question Number. 51. When charging an oxygen bottle with gaseous oxygen, the oxygen is.
Option A. passed into the bottle as quickly as possible to keep the temperature down.
Option B. passed into the bottle slowly to keep temperature at approximately ambient.
Option C. passed into the bottle at any rate as this does not affect temperature.
Correct Answer is. passed into the bottle slowly to keep temperature at approximately ambient.
Explanation. AL/3-25 5.12.2 (vi).

Question Number. 52. In areas closely associated with oxygen systems, particular care must be taken to avoid leaving.
Option A. traces of oils or greases.
Option B. acrylic based plastic materials.
Option C. magnesium particles.
Correct Answer is. traces of oils or greases.

Explanation. A&P Technician Airframe Textbook Chapter 14-19 rh column 2nd para.

Question Number. 53. When working in the vicinity of an oxygen system.
Option A. the area must be well ventilated.
Option B. no electrical power must be used.
Option C. oil must not come into contact with the system.
Correct Answer is. oil must not come into contact with the system.
Explanation. NIL.

Question Number. 54. A chemical oxygen generator operates at.
Option A. 45°C at 10 psi for 15 minutes.
Option B. 45°F at 10 psi for 15 minutes.
Option C. 45°K at 10 psi for 15 minutes.
Correct Answer is. 45°C at 10 psi for 15 minutes.
Explanation. AL/3-25 3.5.2.

Question Number. 55. When charging an oxygen bottle in situ.
Option A. charge in accordance with the temperature/pressure graph.
Option B. charge slowly through a water trap.
Option C. slacken off the retaining straps first.
Correct Answer is. charge in accordance with the temperature/pressure graph.
Explanation. AL/3-25 5.12.2 (vi) (a).

Question Number. 56. The gauge fitted to an oxygen bottle indicates.
Option A. pressure.
Option B. temperature.
Option C. purity.
Correct Answer is. pressure.
Explanation. AL/3-25 4.2.

Question Number. 57. The application of thread lubrication tape in an oxygen system should be.
Option A. applied to all except the first two threads and not more than 3 complete wraps of tape.
Option B. applied to all except the first two threads and not more than one complete wrap of tape.
Option C. applied to all the threads and not more than one complete wrap of tape.
Correct Answer is. applied to all except the first two threads and not more than 3 complete wraps of tape.
Explanation. CAAIPs Leaflet 5-9 Para 5.7.

Question Number. 58. High pressure lines in oxygen systems are made of.
Option A. stainless steel.
Option B. aluminium alloy.
Option C. titanium.
Correct Answer is. stainless steel.
Explanation. CAAIPs Leaflet 5-9 p8 para 4.3.1.

Question Number. 59. Lubricate oxygen connector threads using.
Option A. hellerene.
Option B. Teflon tape.
Option C. WD40.
Correct Answer is. Teflon tape.
Explanation. NIL.

Question Number. 60. How is an expended chemical oxygen generator indicated?.
Option A. A pressure seal would be broken.
Option B. By a change in colour of heat sensitive paint.
Option C. The indicator pin would be protruding.
Correct Answer is. By a change in colour of heat sensitive paint.
Explanation. NIL.

Question Number. 61. Oxygen purging is a process of.
Option A. pressure testing the system.
Option B. measuring the flow rate from the regulator.
Option C. removing moisture from the system.
Correct Answer is. removing moisture from the system.
Explanation. CAAIPs Leaflet 5-9 p19 para 6.

Question Number. 62. To check an oxygen system for moisture.
Option A. a sniff test is used.
Option B. a hygrometer is used.
Option C. pass 72 litres/min through a filter paper in a clean glass.
Correct Answer is. a hygrometer is used.
Explanation. CAAIP\'s Leaflet 6.4.1.

11A.16. Pneumatic/Vacuum (ATA 36).

Question Number. 1. When the moisture separator is purged in a pneumatic system, it dumps.
Option A. just the moisture trap.

Option B. the whole system.
Option C. the system between compressor and regulator valve.
Correct Answer is. just the moisture trap.
Explanation. Jeppesen A&P Technician Airframe Textbook Page 8-54. CAIPs AL/3-22.

Question Number. 2. The pneumatic system pump is a.
Option A. centrifugal type.
Option B. rotor vane type.
Option C. piston type.
Correct Answer is. piston type.
Explanation. Jeppesen A&P Technician Airframe Textbook Page 8-56, Although smaller systems may have avane type.

Question Number. 3. In a pneumatic system, the maintainer valve will be fitted in supply lines to.
Option A. essential equipment.
Option B. all equipment.
Option C. non-essential equipment.
Correct Answer is. non-essential equipment.
Explanation. CAIPs AL/3-22. Maintainer valves work in same way as those in hydraulic systems (hence the reference). Although they protect the flow to the essential systems, they do so by being situated in the non-essential lines, and closing off if the pressure drops.

Question Number. 4. High pressure pneumatic source is a.
Option A. reciprocating pump.
Option B. centrifugal Compressor.
Option C. butterfly pump.
Correct Answer is. reciprocating pump.
Explanation. CAIPs AL/3-23 4.1.

Question Number. 5. High pressure pneumatic pump is a.
Option A. reciprocating pump.
Option B. spur gear.
Option C. butterfly pump.
Correct Answer is. reciprocating pump.
Explanation. CAIPs AL/3-23 4.1.

Question Number. 6. If the pneumatic water drain trap is left open for a long time it will drain.
Option A. between the compressor and the PRV.
Option B. just the moisture trap.

Option C. all the system.
Correct Answer is. between the compressor and the PRV.
Explanation. CAIPs AL/3-22 Fig 1.

Question Number. 7. On a high pressure pneumatic system, if the drain plug for oil and water is left open for long periods of time, the system would.
Option A. lose pressure from the compressor side only.
Option B. lose pneumatic pressure partially.
Option C. lose all pressure.
Correct Answer is. lose pressure from the compressor side only.
Explanation. AL/3-22 figure 1.

Question Number. 8. Two compressors driven by separate engines use.
Option A. Interconnected to share loads.
Option B. NRVs to prevent compressors driving each other.
Option C. PRVs.
Correct Answer is. NRVs to prevent compressors driving each other.
Explanation. NIL.

Question Number. 9. What is important about the air entering a dry air pump?.
Option A. It must be filtered.
Option B. It must be pressure controlled.
Option C. It must be temperature controlled.
Correct Answer is. It must be filtered.
Explanation. NIL. http://www.avweb.com/news/maint/182905-1.html

Question Number. 10. What type of compressor is used on a pneumatic system?.
Option A. Rotary vane type.
Option B. Spur gear type.
Option C. Positive displacement type.
Correct Answer is. Positive displacement type.
Explanation. NIL.

11A.17. Water/Waste (ATA 38).

Question Number. 1. Toilet flush motor is protected from overheat by.
Option A. thermal protection.
Option B. water cooling.
Option C. cooling fan on timer switch.
Correct Answer is. thermal protection.
Explanation. AWN 57.

Question Number. 2. What is the purpose of thermal protection on electric toilet motor?.

Option A. Prevent motor overheating and become fire hazard.
Option B. Prevent toilet freezing.
Option C. Stop motor running beyond 10 seconds if timer become unserviceable.
Correct Answer is. Prevent motor overheating and become fire hazard.
Explanation. AWN 57 Para.2.3.

Question Number. 3. Waste water drain masts.
Option A. are not heated.
Option B. are heated using low amperage in the Air and on ground.
Option C. are heated using low amperage with the aircraft on ground only.
Correct Answer is. are heated using low amperage with the aircraft on ground only.
Explanation. 737 AMM ch. 30-71 28VAC on ground and 115VAC in air.

Question Number. 4. the seal of the valve is replaceable without draining the tanks.

Option A. the seal of the valve is replaceable without draining the tanks.
Option B. the tank must be de-fuelled.
Option C. the seal is not replaceable, the whole drain assembly must be replaced.
Correct Answer is. the seal of the valve is replaceable without draining the tanks.
Explanation. NIL.

Question Number. 5. Drinking water pipes are prevented from freezing by.
Option A. installation of neoprene foam insulation.
Option B. wrapping the pipes with heated tapes or ribbons.
Option C. placing the pipes adjacent to hot water piping.
Correct Answer is. wrapping the pipes with heated tapes or ribbons.
Explanation. NIL.

Question Number. 6. Toilets are the subject of.
Option A. AWN 83.
Option B. AWN 79.
Option C. AWN 80.
Correct Answer is. AWN 83.
Explanation. All the AWNs listed have now been removed. Download an old copy from the Forum.

Question Number. 7. Toilet waste valves are.

Option A. not spring loaded.
Option B. spring loaded open.
Option C. spring loaded closed.
Correct Answer is. spring loaded closed.
Explanation. NIL.

Question Number. 8. The heater used on a drain mast would be a.
Option A. induction heater.
Option B. hot air blower.
Option C. ribbon heater.
Correct Answer is. ribbon heater.
Explanation. NIL.

Question Number. 9. A toilet recirculation fan is unserviceable in flight.
Option A. Close toilet until landing.
Option B. You can use the toilet as the toxic chemical toilet.
Option C. It can be overcome by thermal compensating device.
Correct Answer is. Close toilet until landing.
Explanation. IAW B737-400 mmel/ddg item 38-2, the associate lavatory system may be inop. with lav door secured closed and placard 'INOPERATIVE- DO NOT ENTER'. Toilet recirc fan is part of the lav system.

11A.18. On Board Maintenance Systems.

Question Number. 1. The real time on a CMC is when.
Option A. existing faults page is selected on the CDU.
Option B. ground test page is selected on the CDU.
Option C. fault history page is selected on the CDU.
Correct Answer is. existing faults page is selected on the CDU.
Explanation. Aircraft Electricity and Avionics (5th Edition) Eismin Page 271.

Question Number. 2. One of the inputs in a CMC is autopilot controls. The data will be stored in.
Option A. erased only after end of sector.
Option B. non-volatile memory.
Option C. volatile memory.
Correct Answer is. non-volatile memory.
Explanation. Aircraft Electricity and Avionics (5th Edition) Eismin Page 271.

Question Number. 3. In an autoland aircraft fitted with a CMC.
Option A. all faults are recorded in Volatile memory.

Option B. all faults are recorded in Non-Volatile memory.
Option C. only Primary Faults are recorded.
Correct Answer is. all faults are recorded in Non-Volatile memory.
Explanation. Aircraft Electricity and Avionics (5th Edition) Eismin Page 271.

Question Number. 4. In a CMC system, where would you find a 'real time' fault?.
Option A. In Test.
Option B. In Fault History.
Option C. In Fault.
Correct Answer is. In Fault.
Explanation. Aircraft Electricity and Electronics, Eismin, page 270-273. 'Real time' means reporting of a fault as it occurs, not in Fault History or Test.

Question Number. 5. A modern aircraft CMC uses.
Option A. an LED display.
Option B. a magnetic fault indicator.
Option C. a CRT screen.
Correct Answer is. a CRT screen.
Explanation. NIL.

Question Number. 6. A Flight Data Recorder is activated when.
Option A. when power is applied to the helicopter.
Option B. the helicopters engines are started.
Option C. the helicopter takes off.
Correct Answer is. the helicopters engines are started.
Explanation. JAR Ops-3.

Question Number. 7. In a CMC, warning signals are generated by.
Option A. FMC.
Option B. CMC.
Option C. Warning computer.
Correct Answer is. Warning computer.
Explanation. Transport Category Aircraft Systems 11-5.

Question Number. 8. An aircraft condition monitoring system.
Option A. detects the source of a fault.
Option B. sends information to the central maintenance cell.
Option C. stores information for long term error analysis.
Correct Answer is. stores information for long term error analysis.
Explanation. NIL.

Question Number. 9. With a ACMS quick access recorder.
Option A. the tape must not have been used before.
Option B. the tape can have been used previously if it is first bulk erased.
Option C. you must use digital tape.
Correct Answer is. the tape can have been used previously if it is first bulk erased.
Explanation. NIL.

11A.19.

Question Number. 1. To purge and unpleasant odour/ moisture from an oxygen system you must.
Option A. completely empty and fill the system with oxygen at least 3 times.
Option B. completely empty and fill the system with nitrogen at least 3 times.
Option C. completely empty and fill the system with air at least 3 times.
Correct Answer is. completely empty and fill the system with nitrogen at least 3 times.
Explanation. NIL.

Question Number. 2. Slat asymmetry may be monitored by using.
Option A. torque sensors.
Option B. position pick-offs.
Option C. spring actuators.
Correct Answer is. position pick-offs.
Explanation. AMM 767 27-88-00.

Question Number. 3. In large air conditioning systems, the main fan is activated to.

Option A. ensure positive duct pressure is maintained.
Option B. ensure conditioned air is distributed.
Option C. ensure conditioned air is distributed and maintain positive duct pressure.
Correct Answer is. ensure conditioned air is distributed and maintain positive duct pressure.
Explanation. NIL.

Question Number. 4. If a reduction in pack outlet temp is demanded the temperature of the air at the outlet of the ACM compressor will.
Option A. remain the same.
Option B. rise.
Option C. fall.
Correct Answer is. remain the same.
Explanation. Pack outlet temperature is determined by bypassing engine bleed air around the ACM (trim air).The ACM is unaffected.

Question Number. 5. The rigging of a non magnetic proximity sensor requires.
Option A. checking the target clearance in the FAR position against reference figures.
Option B. checking the target clearance in the NEAR position against reference figures.
Option C. ensuring the target contacts the sensor.
Correct Answer is. checking the target clearance in the NEAR position against reference figures.
Explanation. NIL.

Question Number. 6. In a constant colume hydraulic EDP the short shaft which engages with the engine gearbox would have.
Option A. 2 female splined portions separated by a waisted section.
Option B. 2 male spline portions seperated by a waisted section designed to shear should the pump seize.
Option C. an inner female splined portion and an outer male splined portion.
Correct Answer is. 2 male spline portions seperated by a waisted section designed to shear should the pump seize.
Explanation. NIL.

Question Number. 7. Pressurisation system operation may be inhibited by.
Option A. flap microswitches.
Option B. air/ground microswitches.
Option C. throttle microswitches.
Correct Answer is. throttle microswitches.
Explanation. AMM 767 21-31-00.

Question Number. 8. Hi-lok fastener installation requires that.
Option A. the fastener is accurately torqued.
Option B. the shank is lubricated.
Option C. an interference fit hole is drilled.
Correct Answer is. an interference fit hole is drilled.
Explanation. Hiloks are pre-lubricated. Hole is drilled 0.0015 inch interference. Hi-lok/Hi-tique installation guide can be download from Tutorial Support Section.

Question Number. 9. Large aircraft air conditioning systems cabin temperature control.

Option A. is selectable for each zone individually from the flight station.
Option B. all zone temperatures are controlled from one master switch.
Option C. involves modulating the pack valve.
Correct Answer is. is selectable for each zone individually from the flight station.
Explanation. AMM 767 21-61-00.

Question Number. 10. Information on Galley equipment can be found in.
Option A. CAAIPS.
Option B. BCAR Section L.
Option C. Airworthiness Notice 99.
Correct Answer is. Airworthiness Notice 99.
Explanation. Now removed and included in CAP 747, but is still asked on the exam.

Question Number. 11. A pressure operated ice detector would.
Option A. have a build up of ice that causes a torque switch to illuminate a flight deck annunciator.
Option B. be completely covered in ice before causing an alarm to sound on the flight deck.
Option C. have a build up of ice on the leading edge that causes a warning light to illuminate on the flight deck.
Correct Answer is. be completely covered in ice before causing an alarm to sound on the flight deck. OR have a build up of ice on the leading edge that causes a warning light to illuminate on the flight deck.
Explanation. NIL.

Question Number. 12. A tyre valve cap is used to.
Option A. prevent a leak.
Option B. secure the valve by screwing up to the valve base.
Option C. secure the valve by screwing up to the shoulder of the wheel.
Correct Answer is. secure the valve by screwing up to the shoulder of the wheel. OR prevent a leak.
Explanation. NIL.

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