Question Number. 56. Dutch Roll affects.
Option A. pitch and yaw simultaneously.
Option B. yaw and roll simultaneously.
Option C. pitch and roll simultaneously.
Correct Answer is. yaw and roll simultaneously.
Explanation. Automatic Flight Control. Pallett page 26.

Question Number. 57. Which of the following are primary control surfaces?.
Option A. Elevators, ailerons, rudder.
Option B. Roll spoilers, elevators, tabs.
Option C. Elevators, roll spoilers, tabs.
Correct Answer is. Elevators, ailerons, rudder.
Explanation. NIL.

Question Number. 58. A split flap.
Option A. forms part of the trailing edge's lower surface when retracted.
Option B. forms part of the leading edge's lower surface when retracted.
Option C. forms part of the trailing edge's upper surface when retracted.
Correct Answer is. forms part of the trailing edge's lower surface when retracted.
Explanation. Jeppesen A&P Airframe Technician Textbook Page1-30 /31.

Question Number. 59. An anti-servo tab.
Option A. assists the pilot to move the controls back to neutral.
Option B. moves in the opposite direction to the control surface to assist the pilot.
Option C. moves in the same direction as the control surface to assist the pilot.
Correct Answer is. assists the pilot to move the controls back to neutral.
Explanation. NIL.

Question Number. 60. Slats.
Option A. keep the boundary layer from separating for longer.
Option B. increase the overall surface area and lift effect of wing.
Option C. act as an air brake.
Correct Answer is. keep the boundary layer from separating for longer.
Explanation. Jeppesen A & P technician airframe textbook page 1-32.

Question Number. 85. What is the term used for the amount of water in the atmosphere?.
Option A. Relative humidity.
Option B. Absolute humidity.
Option C. Dew point.
Correct Answer is. Absolute humidity.
Explanation. NIL.

Question Number. 86. An anti-balance tab is moved.
Option A. via a fixed linkage.
Option B. hydraulically.
Option C. when the C.G. changes.
Correct Answer is. via a fixed linkage.
Explanation. NIL.

Question Number. 87. A servo tab is operated.
Option A. directly by the pilot to produce forces which in turn move the main control surfaces.
Option B. automatically, and moves in the same direction as the main control surfaces.
Option C. by a trim wheel and moves in the opposite direction to the main control surfaces when moved.
Correct Answer is. directly by the pilot to produce forces which in turn move the main control surfaces.
Explanation. Jeppesen A&P Technician Airframe Textbook Page 23.

Question Number. 88. On an aircraft with an all-moving tailplane, pitch up is caused by.
Option A. decreasing tailplane incidence.
Option B. up movement of the elevator trim tab.
Option C. increasing tailplane incidence.
Correct Answer is. decreasing tailplane incidence.
Explanation. NIL.

Question Number. 89. When checking full range of control surface movement, they must be positioned by.
Option A. moving them by hand directly until against the primary stops.
Option B. moving them by hand directly until against the secondary stops.
Option C. operating the control cabin controls until the system is against the primary stops.
Correct Answer is. operating the control cabin controls until the system is against the primary stops.
Explanation. NIL.

Question Number. 139. Vortex generators are fitted to.
Option A. move transition point rearwards.
Option B. move transition point forwards.
Option C. advance the onset of flow separation.
Correct Answer is. move transition point forwards.
Explanation. NIL.

Question Number. 140. Leading edge flaps.
Option A. increase stalling angle of the wing.
Option B. decrease stalling angle of the wing.
Option C. do not change the stalling angle.
Correct Answer is. increase stalling angle of the wing.
Explanation. NIL.

Question Number. 141. Krueger flaps are on.
Option A. the leading edge.
Option B. either the leading or training edge.
Option C. the trailing edge.
Correct Answer is. the leading edge.
Explanation. NIL.

Question Number. 142. Sweepback will.
Option A. decrease lateral stability.
Option B. not affect lateral stability.
Option C. increase lateral stability.
Correct Answer is. increase lateral stability.
Explanation. NIL.

Question Number. 143. A plain flap.
Option A. does not increase the wing area on deployment.
Option B. is attached to the leading edge of the wing.
Option C. forms part of lower trailing edge.
Correct Answer is. does not increase the wing area on deployment.
Explanation. NIL.

Question Number. 144. A split flap, when deployed.
Option A. is used only on high speed aircraft.
Option B. increases lift without a corresponding increase in drag.
Option C. increases drag with little lift coefficient increase, from intermediate to fully down.
Correct Answer is. increases drag with little lift coefficient increase, from intermediate to fully down.
Explanation. NIL.

Question Number. 145. A flying control mass balance weight.
Option A. keeps the control surface C of G as close to the trailing edge as possible.
Option B. tends to move the control surface C of G close to the hinge line.
Option C. tends to move the control surface C of G forward of the hinge line.
Correct Answer is. tends to move the control surface C of G close to the hinge line.
Explanation. NIL.

Question Number. 146. An elevator controls the aircraft motion in.
Option A. yaw.
Option B. roll.
Option C. pitch.
Correct Answer is. pitch.
Explanation. NIL.

13.01b. Theory of Flight - High Speed Flight.

Question Number. 1. Air above Mach 0.7 is.
Option A. compressible only when above the speed of sound.
Option B. incompressible.
Option C. compressible.
Correct Answer is. compressible.
Explanation. Aircraft Flight Barnard and Philpot, Second Edition Page123. Mechanics of Flight AC Kermode 10th Edition Page 385.

Question Number. 11. Which of the following will increase the Critical Mach Number of an aerofoil?.
Option A. Using a thin airfoil and sweeping the wings back.
Option B. Decreasing the fineness ratio of the wings.
Option C. Increasing the aspect ratio of the wings.
Correct Answer is. Using a thin airfoil and sweeping the wings back.
Explanation. NIL.

Question Number. 12. As an aircraft accelerates through the transonic region, the centre of pressure tends to.
Option A. turn into a shock wave.
Option B. move rearward.
Option C. move forward.
Correct Answer is. move rearward.
Explanation. NIL.

Question Number. 13. Supersonic air going through an incipient shock wave will decrease its speed and.
Option A. decrease temperature and increase density.
Option B. increase temperature and decrease density.
Option C. increase temperature and increase density.
Correct Answer is. increase temperature and increase density.
Explanation. Mechanics of Flight AC Kermode 10th Edition Page 326 fig 11.4.

Question Number. 14. An increase in mach number will cause the.
Option A. CofP to move rearwards giving more downwash on the tail plane.
Option B. CofP to move forwards giving less downwash on the tail plane.
Option C. CofP to move rearwards giving less downwash on the tail plane.
Correct Answer is. CofP to move rearwards giving less downwash on the tail plane.
Explanation. Automatic Flight Control, Pallett. Page 50.

Question Number. 15. At speeds above Mach 1, shockwaves will form above and below the wing.
Option A. at the trailing edge.
Option B. at both the leading edge and the trailing edge.
Option C. at the leading edge.
Correct Answer is. at both the leading edge and the trailing edge.
Explanation. NIL.

Question Number. 16. Above the critical mach number, the drag coefficient.
Option A. increases.
Option B. remains the same.
Option C. decreases.
Correct Answer is. increases.
Explanation. NIL.

Question Number. 17. Mach trim counters.
Option A. longitudinal instability.
Option B. vertical instability.
Option C. lateral instability.
Correct Answer is. longitudinal instability.
Explanation. Automatic Flight Control Pallett page 231 and 50.

Question Number. 18. At high Mach Numbers above Mach 2.2, some aircraft metals.
Option A. such as aluminium, become brittle.
Option B. lose their strength due to the kinetic heating effect.
Option C. will shrink due to the extreme pressures involved.
Correct Answer is. lose their strength due to the kinetic heating effect.
Explanation. NIL.

Question Number. 19. Mach trim operates.
Option A. along the longitudinal axis.
Option B. along the lateral axis.
Option C. to reduce Dutch roll.
Correct Answer is. along the longitudinal axis.
Explanation. NIL.

Question Number. 20. To increase critical mach number.
Option A. the wings are swept.
Option B. elevons are fitted.
Option C. tailerons are fitted.
Correct Answer is. the wings are swept.
Explanation. NIL.

Question Number. 36. On a helicopter, what is vortex ring state?.
Option A. Tip vortex build-up during hover.
Option B. Tip vortex interference at high forward speed.
Option C. Ground vortex interference when hovering close to the ground.
Correct Answer is. Tip vortex build-up during hover.
Explanation. During hover, the tip vortex of one blade adds to the tip vortices of the preceding blades, producing a large vortex ring and a very inefficient helicopter.

Question Number. 37. Climbs with forward speed require less power than vertical climbs, because of.
Option A. translational lift.
Option B. increased inertia.
Option C. forward momentum.
Correct Answer is. translational lift.
Explanation. NIL.

Question Number. 38. Translational flight is.
Option A. achieved by raising or lowering the collective lever.
Option B. when the helicopter changes from one steady flight condition to another.
Option C. achieved by tilting the rotor disc in the direction of flight.
Correct Answer is. achieved by tilting the rotor disc in the direction of flight.
Explanation. NIL.

Question Number. 39. The best design of a rotor blade is where the CofP.
Option A. moves freely along the length of the blade.
Option B. does not move.
Option C. is insignificant.
Correct Answer is. does not move.
Explanation. NIL.

Question Number. 69. Solidity of the rotor is the ratio of the.
Option A. blade area to disc area.
Option B. all up weight to blade area.
Option C. all up weight to disc area.
Correct Answer is. blade area to disc area.
Explanation. NIL.

Question Number. 70. Which direction is the air flowing through the main rotor during autorotation?.
Option A. Upwards.
Option B. Parallel to the rotor chord line.
Option C. Downwards.
Correct Answer is. Upwards.
Explanation. NIL.

Question Number. 71. The purpose of an off-set vertical stabilizer is to.
Option A. provide stability during vertical flight.
Option B. relieve some of the load on the tail rotor during forward flight.
Option C. provide lift during forward flight.
Correct Answer is. relieve some of the load on the tail rotor during forward flight.
Explanation. NIL.

Question Number. 72. The purpose of the horizontal stabilizer is to.
Option A. maintain the aircraft in as near a horizontal attitude as possible, during forward flight.
Option B. to reduce rotor head loads during translational flight.
Option C. to stabilize the aircraft in the hover.
Correct Answer is. maintain the aircraft in as near a horizontal attitude as possible, during forward flight.
Explanation. NIL.

Question Number. 73. During autorotation, the rudder pedals.
Option A. would need to be backed off due to the loss of torque.
Option B. would have no effect on directional control.
Option C. would need to be advanced to counteract the increased torque.
Correct Answer is. would need to be backed off due to the loss of torque.
Explanation. NIL.

Question Number. 74. In forward flight, the advancing blade would be expected to.
Option A. lag.
Option B. increase pitch.
Option C. flap up.
Correct Answer is. flap up.
Explanation. NIL.

Question Number. 75. When the helicopter moves from the hover to translational flight, the lift vector will.
Option A. remain vertical.
Option B. move forward.
Option C. move aft.
Correct Answer is. move forward.
Explanation. NIL.

Question Number. 76. If the blade angle of attack increases.
Option A. lift increases only.
Option B. lift and drag increases.
Option C. drag increases only.
Correct Answer is. lift and drag increases.
Explanation. NIL.

Question Number. 77. When a blade is flapping up.
Option A. pitch will increase.
Option B. pitch will decrease.
Option C. lift and drag both increase.
Correct Answer is. pitch will decrease.
Explanation. NIL.

Question Number. 78. Vortex ring start requires.
Option A. retreating blade stall.
Option B. advancing blade stall.
Option C. power on descent.
Correct Answer is. power on descent.
Explanation. The helicopter and how it flies Page 117 by John Fay.

Option B. metal for earthing purposes.
Option C. metal with PVC coating and anti corrosive paint.
Correct Answer is. metal with PVC coating and anti corrosive paint.
Explanation. Aircraft Electrical Systems. Pallett. Page 24.

Question Number. 34. Dissimilar metal fusion bonding is best for.
Option A. high strength high ductility.
Option B. low strength high toughness.
Option C. high strength high toughness.
Correct Answer is. high strength high ductility.
Explanation. NIL. http://www.user.lasercom.net/normajean/normajean/newpage1.htm

Question Number. 35. The ideal conditions for paint spraying an aircraft are.
Option A. 20°C to 30°C and humidity below 70%.
Option B. 15°C to 25°C and humidity above 60%.
Option C. 15°C to 25°C and humidity below 75%.
Correct Answer is. 15°C to 25°C and humidity below 75%.
Explanation. B.L/6-20 5.

Question Number. 36. Slats, when stowed, make up part of the wing.
Option A. leading edge upper surface.
Option B. leading edge lower surface.
Option C. trailing edge.
Correct Answer is. leading edge upper surface.
Explanation. Mechanics of Flight AC Kermode Pages 117 and 118.

Question Number. 37. A plain flap.
Option A. when deployed increases the camber of the wing.
Option B. when stowed makes up part of the wing trailing edge lower surface.
Option C. when stowed makes up part of the wing trailing edge upper surface.
Correct Answer is. when deployed increases the camber of the wing.
Explanation. Mechanics of Flight AC Kermode Page 116.

Question Number. 38. What are the types of true bonded joints?.
Option A. Mechanical and cemented.

Option B. plastic.
Option C. stainless steel.
Correct Answer is. stainless steel.
Explanation. NIL.

Question Number. 75. An overweight landing is one in which the aircraft has.
Option A. too much kinetic energy on landing.
Option B. a missed placed centre of gravity on landing.
Option C. an excessive fuel load on take-off.
Correct Answer is. too much kinetic energy on landing.
Explanation. NIL.

Question Number. 76. Symmetry checks should be carried out.
Option A. in the hanger with the aircraft on jacks.
Option B. on the ramp with the aircraft on its wheels.
Option C. in the hangar with the aircraft on its wheels.
Correct Answer is. in the hanger with the aircraft on jacks.
Explanation. CAAIPs Leaflet 6-5 para 2.

Question Number. 77. A structural member intended to resist compression is a.
Option A. strut.
Option B. tie.
Option C. web.
Correct Answer is. strut.
Explanation. NIL.

Question Number. 78. An aircraft structure, having multiple load paths, is known as a.
Option A. fail-safe design.
Option B. safe-life design.
Option C. monocoque design.
Correct Answer is. fail-safe design.
Explanation. NIL.

Question Number. 79. When an item is cocooned, the visual indicator will indicate.
Option A. humidity.

Option B. ANO 25.
Option C. CS 25.
Correct Answer is. CS 25.
Explanation. JAR 25 is replaced by EASA Certification Specification CS 25.

Question Number. 90. An Anthropomorphic Test Dummy (ATD) is strapped into a large aircraft forward facing seat. It is put through a series of crash tests. This is to.
Option A. to determine whether or not the ATD's head comes into contact with any structure or seat, and if so to measure the force applied to the head in line with a specific Head Injury Criterion (HIC).
Option B. test the aircraft structure and seating mount points for structural integrity.
Option C. to measure the amount of force applied to the abdomen of the ATD to ensure it is not above 236 kg.
Correct Answer is. to determine whether or not the ATD's head comes into contact with any structure or seat, and if so to measure the force applied to the head in line with a specific Head Injury Criterion (HIC).
Explanation. JAR 25.562 (b) para 6.

13.02b. Structures - General Concepts.

Question Number. 1. What preventative maintenance can be carried out in case of H.I.R.F?.
Option A. Shielding of all sensitive equipment.
Option B. Bonding and insulation tests.
Option C. Check of aircraft structure.
Correct Answer is. Shielding of all sensitive equipment.
Explanation. The exact definition of H.I.R.F does not include electrostatic discharge (ESD). But only interference from outside sources. Understanding H.I.R.F By Gerald L. Fuller.

Question Number. 2. Zone 320 under the ATA system is.
Option A. vertical stabiliser.
Option B. horizontal stabiliser.
Option C. central fuselage.
Correct Answer is. vertical stabiliser.
Explanation. Aircraft Maintenance and Repair Kroes/Watkins/Delp Page 22.

Question Number. 3. Weather radar domes are protected from lightning strikes by.
Option A. special conducting or non-conducting grease.

Option B. 22 SWG * 0.25.
Option C. 22 SWG * 0.5.
Correct Answer is. 18 SWG for a single wire.
Explanation. CAAIPs Leaflet 9-1 3.3.1 (ii).

Question Number. 34. Using the following: FS 345, RWS 45, where is this located?.
Option A. 345 inches back from the nose and 45 inches along the right wing.
Option B. 345 inches back from the datum line, 45 inches from the longitudinal centre line of the right wing.
Option C. 345 inches back from the nose, 45 nches from the longitudinal centre line of the right wing.
Correct Answer is. 345 inches back from the datum line, 45 inches from the longitudinal centre line of the right wing.
Explanation. NIL.

Question Number. 35. When carrying out an insulation resistance test of a pitot probe you would expect.
Option A. 1 megohm when cold.
Option B. 5 megohm.
Option C. 3 megohm when hot and when cooled down.
Correct Answer is. 3 megohm when hot and when cooled down.
Explanation. NIL.

Question Number. 36. What are buttock lines?.
Option A. Horizontal measurement lines.
Option B. Measurements from the centre line.
Option C. Vertical measurement lines.
Correct Answer is. Measurements from the centre line.
Explanation. CAIPs A.L/7.2 Page 17 Para 6.2.

Question Number. 37. Aircraft fibreglass panels are protected against lighting strikes, partially by.
Option A. bonding.
Option B. conductive paint.
Option C. non-conductive paint.
Correct Answer is. conductive paint.
Explanation. NIL.

Question Number. 38. When attaching more than one jumper or ground lead terminal to structure with a single fastener.

Option B. alert height.
Option C. intercept height.
Correct Answer is. decision height.
Explanation. Jeppesen Avionics Fundamentals Page 204. Automatic Flight Control. Pallett. Page 278.

Question Number. 27. The ICAO weather category 3A is.
Option A. operation down to 60 m and 800 m.
Option B. operation down to and along the surface of the runway without external reference.
Option C. operation down to and along the surface of the runway with RVR of 200m.
Correct Answer is. operation down to and along the surface of the runway with RVR of 200m.
Explanation. Automatic Flight Control Pallett 4th Edition Page 279.

Question Number. 28. A category 2 facility performance ILS has an intercept height of.
Option A. 60 m.
Option B. 0 m.
Option C. 15 m.
Correct Answer is. 15 m.
Explanation. ICAO Annexe 10 Landing Aid Categories.

Question Number. 29. The facility performance ILS intersect height is the point.
Option A. the localiser and glide path signals cross each other.
Option B. where the aeroplane receives the first glide path signal.
Option C. where the aeroplanes first receives both the localiser and glide path signals.
Correct Answer is. the localiser and glide path signals cross each other.
Explanation. ICAO Annexe 10 Landing Aid Categories.

Question Number. 30. The average risk of autoland should not contribute a rate of fatal accidents per landing greater than.
Option A. 1 * 10-8.
Option B. 1 * 10-6.

Correct Answer is. prevent the system engagement if a fault exists.
Explanation. Automatic Flight Control. Pallett. Page 100.

Question Number. 64. During flare mode, autothrottle will.
Option A. retard throttles to idle.
Option B. select reverse thrust.
Option C. disconnect autothrottle.
Correct Answer is. retard throttles to idle.
Explanation. Automatic Flight Control. Pallett. Page 285.

Question Number. 65. In autopilot, the control column.
Option A. does not move.
Option B. moves in pitch and roll.
Option C. moves in pitch.
Correct Answer is. moves in pitch and roll.
Explanation. A&P Airframe Technician Textbook Pg 12-47 (Parallel system). This is assuming it is a non-fly-by-wire aircraft.

Question Number. 66. If on an ILS approach, Localiser signal is lost.
Option A. aircraft moves in a circle.
Option B. aircraft descends in a parallel path to runway.
Option C. aircraft continues descent with an accumulating drift.
Correct Answer is. aircraft descends in a parallel path to runway.
Explanation. Automatic Flight Control, Pallett Page 185.

Question Number. 67. When is autothrottle disengaged?.
Option A. On landing.
Option B. After thrust reverser has deployed beyond 90% so that TO/GA can be selected in case of emergency.
Option C. On selection of thrust reverse.

Correct Answer is. No other pitch modes are available.
Explanation. NIL.

Question Number. 83. What is B-RNAV?.
Option A. Indicates true airspeed.
Option B. Ability to store 6 waypoints.
Option C. Indicates bearing and airspeed until next active waypoint.
Correct Answer is. Indicates bearing and airspeed until next active waypoint.
Explanation. See Module 11 Forum.

Question Number. 84. An Automatic Flight Control System receives inputs from the following ground based transmitters.
Option A. VOR, ILS.
Option B. D.M.E, ILS, A.D.F.
Option C. RA, A.D.F, ILS.
Correct Answer is. VOR, ILS.
Explanation. An A.F.C.S uses VOR and ILS (RA is not ground based).

Question Number. 85. The maximum azimuth coverage by a M.L.S facility is.
Option A. +/-35 degrees.
Option B. +/-40 degrees.
Option C. +/-60 degrees.
Correct Answer is. +/-60 degrees.
Explanation. NIL. http://nweb.pct.edu/homepage/staff/tinman/tinman/avc227327/NAV/mls/sld007.htm but normal is +/-40 degrees.

Question Number. 86. In M.L.S, the 12 bit preamble consists of.
Option A. carrier and 5 bits time reference and 7 bits information.
Option B. 7 bits function and 5 bits time reference and carrier.
Option C. 5 bits time function and carrier and 7 bits function.

Correct Answer is. automatic rudder control and nosewheel steering.
Explanation. Automatic Flight Control. Pallett. Page 259/287.

Question Number. 103. During autoland, failure of one channel is detected.
Option A. All channels will disconnect in triplex system.
Option B. All channels will disconnect in dual-dual system.
Option C. All channels will disconnect in duplex system.
Correct Answer is. All channels will disconnect in duplex system.
Explanation. Automatic Flight Control. Pallett. Page 282.

Question Number. 104. In triplex autoland system, failure of one channel will.
Option A. disconnect all channels.
Option B. disconnect the failure channel and continue autoland approach.
Option C. disconnect the failure channel and continue with a manual approach.
Correct Answer is. disconnect the failure channel and continue autoland approach.
Explanation. Automatic Flight Control Pallett Page 282.

Question Number. 105. During the flair mode, the autothrottle will.
Option A. select reverse thrust.
Option B. disconnect autothrottle.
Option C. retard throttle to idle.
Correct Answer is. retard throttle to idle.
Explanation. Automatic Flight Control Pallett Page 285.

Question Number. 106. Roll-out mode occurs.
Option A. after flare.
Option B. at alert height.
Option C. before flare.

Correct Answer is. radio altitude for height hold and barometric altitude for altitude hold.
Explanation. Automatic Flight Control. Pallett. Page 250.

Question Number. 111. On an ILS approach, what will cause the aircraft to fly onto the beam?.
Option A. Radio deviation.
Option B. Height Deviation.
Option C. Course deviation.
Correct Answer is. Radio deviation.
Explanation. NIL.

Question Number. 112. Which of the following modes does an autopilot go through, in correct sequence?.
Option A. Attitude, flare, rollout.
Option B. Rollout, attitude, flare.
Option C. Flare, attitude, rollout.
Correct Answer is. Attitude, flare, rollout.
Explanation. Automatic Flight Control Pallett Page 284 fig 10.2.

Question Number. 113. When can other autopilot modes be selected once Go-Around has been selected?.
Option A. When reached a desired altitude.
Option B. When aircraft has reached 5000feet.
Option C. Disengage and reengage the A.F.C.S system.
Correct Answer is. When reached a desired altitude.
Explanation. Automatic Flight Control. Pallett. Page 266.

Question Number. 114. Alert Height is when.
Option A. an alert of the position of the aircraft is made.
Option B. an alert of the altitude of the aircraft is made.
Option C. a decision of whether to land is made.

Correct Answer is. a decision of whether to land is made.
Explanation. NIL. http://www.iasa.com.au/folders/RoboLander_files/what_the_jar.html

Question Number. 115. Versine is used in which channel?.
Option A. Roll.
Option B. Yaw.
Option C. Pitch.
Correct Answer is. Pitch.
Explanation. Automatic Flight Control. Pallett. Page 244.

Question Number. 116. On a coupled approach, what happens to the aircraft if it looses the localiser signal?.
Option A. It will fly straight down the original course but will drift.
Option B. It will fly on the heading the aircraft was on.
Option C. It will fly in circles.
Correct Answer is. It will fly straight down the original course but will drift.
Explanation. NIL.

Question Number. 117. During an autopilot controlled turn.
Option A. ailerons, rudder and elevators will move.
Option B. ailerons and rudder will move.
Option C. ailerons, rudder and THS will move.
Correct Answer is. ailerons, rudder and elevators will move.
Explanation. NIL.

Question Number. 118. If an autopilot is fed with radio deviation.
Option A. it will stand off the centre line by a fixed amount.
Option B. it will fly in circles.
Option C. it will fly on the heading the aircraft was on.
Correct Answer is. it will fly in circles.
Explanation. NIL.

Question Number. 119. If a series actuator is fitted in the cyclic control circuit of a helicopter, what effect will an autopilot input have?.
Option A. The cyclic lever will not move.
Option B. The flight director bars only will move.

Correct Answer is. Automatically switches off.
Explanation. Automatic Flight Control Pallett and Coyle Page 286.

Question Number. 124. The purpose of the autopilot servo-motor torque setting is to.
Option A. protect the servo motor.
Option B. prevent control surface runaway.
Option C. damp the system oscillation.
Correct Answer is. prevent control surface runaway.
Explanation. Automatic Flight Control Pallett and Coyle.

Question Number. 125. Which signal would be integrated to get onto localiser centreline?.
Option A. Heading error.
Option B. Course error.
Option C. Radio deviation.
Correct Answer is. Heading error.
Explanation. Automatic Flight Control Pallett Page 185.

Question Number. 126. Cat IIIB landing, up to what phase is Localiser signal used?.
Option A. Flare.
Option B. Touchdown.
Option C. Roll out.
Correct Answer is. Roll out.
Explanation. Automatic Flight Control. Pallett. Page 285. CAT IIIa is 'Flare'.

Question Number. 127. Autopilot will operate above what altitude?.
Option A. 750 feet.
Option B. 500 feet.
Option C. 1000 feet.
Correct Answer is. 500 feet.
Explanation. NIL.

Question Number. 128. If the localiser signal is only applied to the A/P roll channel.
Option A. aircraft flies along the runway centre line.
Option B. aircraft flies parallel to the runway centre line.

Option B. vertical steering.
Option C. lateral steering.
Correct Answer is. vertical steering.
Explanation. Aircraft Radio Systems by James Powell page 69.

Question Number. 138. The components of an ILS are:.
Option A. A localizer and the marker beacons.
Option B. A localizer, a glide slope and the marker beacons.
Option C. A localizer and a glide slope.
Correct Answer is. A localizer, a glide slope and the marker beacons.
Explanation. Aircraft Radio Systems by James Powell page 69.

Question Number. 139. When carrying out an autoland approach, VNAV is deselected. The aircraft will enter MCP SPD mode when.
Option A. APP switch is pressed.
Option B. the aircraft receives the first ILS signal.
Option C. the aircraft captures the glideslope.
Correct Answer is. the aircraft captures the glideslope.
Explanation. Automatic Flight Control Pallett Page 288.

Question Number. 140. Airspeed hold is a.
Option A. pitch mode.
Option B. heading mode.
Option C. lateral mode.
Correct Answer is. pitch mode.
Explanation. Automatic Flight Control Pallett Page 169.

Question Number. 141. In an auto trim system, for the trim system to operate.
Option A. operation of the trim controls is required.
Option B. autopilot need not be engaged.
Option C. autopilot must be engaged.
Correct Answer is. autopilot need not be engaged.
Explanation. Automatic Flight Control, Pallett Page 213 - 218.

Question Number. 150. The aircraft is programmed to leave the glideslope at.
Option A. the decrab phase.
Option B. 300 feet.
Option C. the start of flare.
Correct Answer is. the start of flare.
Explanation. Pallett Automatic Flight Control Page 285.

Question Number. 151. Rollout guidance by the rudder is effective to about.
Option A. 80 knots.
Option B. 110 knots.
Option C. 30 knots.
Correct Answer is. 80 knots.
Explanation. NIL.

Question Number. 152. Go-around mode can be initiated.
Option A. at any time.
Option B. after glideslope capture.
Option C. below 2000feet.
Correct Answer is. below 2000feet.
Explanation. Pallett Automatic Flight Control Page 290.

Question Number. 153. An integrated autoland system has been selected to Go-around during the autoland phase, the aircraft will.
Option A. increase speed.
Option B. increase speed and rotate nose up.
Option C. rotate nose up.
Correct Answer is. increase speed and rotate nose up.
Explanation. Pallett Automatic Flight Control Page 290.
Question Number. 154. The integrity of an autopilot must be increased when the aircraft is flying at.
Option A. higher speeds.
Option B. lower speeds.
Option C. approach and landing phases.
Correct Answer is. approach and landing phases.
Explanation. Pallett Automatic Flight Control Page 278.

Question Number. 155. Signals used during the flare are.
Option A. Glide Slope and rad alt.
Option B. Glide Slope and integrated pitch.
Option C. Rad alt and integrated pitch.
Correct Answer is. Rad alt and integrated pitch.
Explanation. Pallett Automatic Flight Control page 285.

Question Number. 156. An autoland is carried out in which sequence?.
Option A. Glide Slope capture, Localiser capture, Attitude hold, Flare.
Option B. Localiser capture, Glide Slope capture, Attitude hold, Flare.
Option C. Localiser capture, Glide Slope capture, Flare, Attitude hold.
Correct Answer is. Localiser capture, Glide Slope capture, Attitude hold, Flare.
Explanation. Pallett Automatic Flight Control Page 285.

Question Number. 157. If a fault is detected during an autoland approach, the system will totally disconnect if it is a.
Option A. duplex system.
Option B. triplex system.
Option C. duA.L/dual system.
Correct Answer is. duplex system.
Explanation. Pallett Automatic Flight Control Page 282.

Question Number. 158. The glideslope signal integrator.
Option A. increases the glide-slope signal.
Option B. decreases the glide-slope signal.
Option C. maintains the glide-slope signal.
Correct Answer is. decreases the glide-slope signal.
Explanation. Automatic Flight Control Pallett page 187.

Question Number. 159. Glideslope gain programming is based on.
Option A. radio altitude.
Option B. altitude above MSL and radio altitude.
Option C. pressure altitude.
Correct Answer is. radio altitude.

Question Number. 164. The glideslope signal integrator.
Option A. increases glideslope signal.
Option B. maintains glideslope signal.
Option C. decreases glideslope signal.
Correct Answer is. decreases glideslope signal.
Explanation. Automatic Flight Control Pallett page 187.

Question Number. 165. On a Cat 3B landing, the localizer signal is used at which phase?.
Option A. Rollout.
Option B. Flare.
Option C. Touchdown.
Correct Answer is. Rollout.
Explanation. NIL.

Question Number. 166. How can a pilot over-ride the auto-throttle?.
Option A. Manually through a clutch on the throttle levers.
Option B. By deselecting auto-throttle first.
Option C. It is not possible.
Correct Answer is. Manually through a clutch on the throttle levers.
Explanation. NIL.

Question Number. 167. Altitude hold mode, what signal is washed out?.
Option A. Rate of climb.
Option B. Altitude.
Option C. Pitch angle.
Correct Answer is. Pitch angle.
Explanation. NIL.

Explanation. NIL.

Question Number. 181. To increase the gain of an amplifier it is necessary to.
Option A. increase the tachogenerator feedback.
Option B. increase to position feedback.
Option C. reduce the tachogenerator feedback.
Correct Answer is. increase to position feedback.
Explanation. Automatic Flight Control Pallett Page 83.

Question Number. 182. In the electro pneumatic servo-motor using dual poppet valves and dual roll-fram actuator, when there is zero command output from the autopilot servo amplifier.
Option A. both valves will be open for an equal period of time.
Option B. both roll fram actuators will fully retract.
Option C. both valves will be closed.
Correct Answer is. both valves will be open for an equal period of time.
Explanation. Automatic Flight Control Pallett Page 205.

Question Number. 183. The purpose of using altitude rate signal to develop the capture point in the altitude acquire mode is.
Option A. as a backup.
Option B. to allow the aircraft to start flaring on to the selected altitude later if the vertical speed is high.
Option C. to allow the aircraft to start flaring on to the selected altitude later if the vertical speed is high.
Correct Answer is. to allow the aircraft to start flaring on to the selected altitude earlier if the vertical speed is high.
Explanation. NIL.

Question Number. 184. When internal navigation control is used, the roll channel signals used are.
Option A. beam deviation and course error.
Option B. drift angle and cross track distance.
Option C. cross track distance and track angle error.
Correct Answer is. NIL.
Explanation. (If the aircraft is at altitude).

Question Number. 189. The autothrottle controls the aircraft.
Option A. both laterally and vertically.
Option B. vertically.
Option C. laterally.
Correct Answer is. vertically.
Explanation. NIL.

Question Number. 190. Speed information to the autothrottle is derived from.
Option A. the IRS.
Option B. the CADC.
Option C. the DME.
Correct Answer is. the CADC.
Explanation. NIL.

Question Number. 191. On replacement of an actuator that incorporates an autopilot actuator, the autopilot must be checked for.
Option A. correct sense of movement.
Option B. correct sense and range of movement.
Option C. correct sense and range of movement and autopilot breakout checks.
Correct Answer is. correct sense and range of movement and autopilot breakout checks.
Explanation. NIL.

Question Number. 192. On replacement of an autopilot servo motor.
Option A. position feedback must be checked.
Option B. elevator and aileron must be checked.
Option C. torque limiting settings must be checked.
Correct Answer is. torque limiting settings must be checked.
Explanation. NIL.

Question Number. 16. On a fibreglass aerial, what paint should be used?.
Option A. Polyurethane.
Option B. Not cellulose.
Option C. Cellulose only.
Correct Answer is. Not cellulose.
Explanation. CAIPs R.L/2-2 8.1.2.

Question Number. 17. Overshoot or go-around mode can be initiated.
Option A. after glideslope capture.
Option B. at any time.
Option C. only when autopilot is engaged.
Correct Answer is. after glideslope capture.
Explanation. Jeppesen Avionics Fundamentals Page 346. G0-around is armed when glideslope is captured or flaps are not up.

Question Number. 18. When painting a neoprene coated radio antenna.
Option A. use any paint.
Option B. do not use cellulose paint.
Option C. use cellulose paint.
Correct Answer is. do not use cellulose paint.
Explanation. CAIPs R.L/2-2 8.1.2.

Question Number. 19. VOR capture can be determined by.
Option A. a predetermined level of the course error signal away from the selected radial.
Option B. a predetermined level of the VOR deviation signal away from the selected radial.
Option C. computation from the vectorial summation of the course error and radio deviation signals.
Correct Answer is. a predetermined level of the VOR deviation signal away from the selected radial.
Explanation. Avionics Fundamentals. Jeppesen Pages 320, 328.

Correct Answer is. transmit pulses of CW.
Explanation. Jeppesen Aircraft Radio Systems - Powell Page 83.

Question Number. 70. During testing of A.T.C altitude function, the pressure altimeter is set.
Option A. sea level pressure.
Option B. 1013.25 mb.
Option C. prevailing pressure.
Correct Answer is. 1013.25 mb.
Explanation. NIL.

Question Number. 71. When will a mode C interrogation be ignored?.
Option A. When the P2 pulse is higher amplitude to P1.
Option B. When the P2 pulse is anti-phase to P1.
Option C. If P2 is before P1.
Correct Answer is. When the P2 pulse is higher amplitude to P1.
Explanation. Aircraft Radio Systems. Powell Page 135.

Question Number. 72. On an ILS approach, what will cause the aircraft to fly onto the beam?.
Option A. Radio deviation.
Option B. Glideslope deviation.
Option C. Course deviation.
Correct Answer is. Radio deviation.
Explanation. Automatic Flight Control, Pallett Page 184/185.

Question Number. 73. If you carry out a V.S.W.R check of a SSB H.F system what should you do with the control switch? Select it to.
Option A. OFF.
Option B. either USB or LSB.
Option C. AM.
Correct Answer is. AM.
Explanation. SSB transmissions require a modulating signal before any real power is transmitted (the carrier wave is suppressed). Full AM however, transmits power regardless of the modulation (if any) and is normally used for V.S.W.R measurements.

Option C. approach along localiser with reference to runway threshold.
Correct Answer is. rad alt decrease.
Explanation. NIL.

Question Number. 101. On power up, the I.R.S obtains position.
Option A. latitude from previous position.
Option B. longitude from previous position.
Option C. latitude and longitude from previous position.
Correct Answer is. longitude from previous position.
Explanation. NIL. http://digilander.libero.it/andreatheone/irs.htm

Question Number. 102. Carbon microphones require.
Option A. no supply.
Option B. AC supply.
Option C. DC supply.
Correct Answer is. DC supply.
Explanation. NIL.

Question Number. 103. Microwave landing systems are modulated with.
Option A. Manchester code.
Option B. phase drift keying.
Option C. FM.
Correct Answer is. phase drift keying.
Explanation. NIL. http://nweb.pct.edu/homepage/staff/tinman/tinman/avc227327/NAV/mls/sld006.htm

Question Number. 104. A CVR is found to be unserviceable.
Option A. flights must not continue after four days.
Option B. flights must not continue after 72 hours.
Option C. flight can continue with serviceable FDR provided they are not combined.
Correct Answer is. flights must not continue after 72 hours.
Explanation. JAA MEL Temporary Guidance Leaflet Number 26. After 72 hours have elapsed from the CVR becoming unserviceable you cannot fly. Also cannot fly if combined CVR/FDR or no more than 8 flying hours.

Option B. Amber.
Option C. Blue.
Correct Answer is. Amber.
Explanation. Jeppesen - Avionics Fundamentals, Page 219 fig 14-2.

Question Number. 110. A G.P.S system is formed from.
Option A. receiver, processing unit, interactive console.
Option B. space, control, user.
Option C. satellites, processing unit, display unit.
Correct Answer is. space, control, user.
Explanation. NIL. http://www.rohms.af.mil/lkn/jssmggps.htm

Question Number. 111. The glideslope equipment operates in the.
Option A. V.H.F band.
Option B. H.F band.
Option C. U.H.F band.
Correct Answer is. U.H.F band.
Explanation. Aircraft Electricity and Electronics. Eismin. Page 308 and table on page 278.

Question Number. 112. For aircraft with dual CMCs, when only one CMC is available, it.
Option A. must be connected to the left side.
Option B. can be connected to either side.
Option C. must be connected to the right side.
Correct Answer is. must be connected to the left side.
Explanation. Aircraft Electricity and Electronics Fifth Edition Eismin Chap 13 page 271.

Question Number. 113. Laser gyros are.
Option A. aligned to the aircraft structure.
Option B. aligned to the magnetic north.
Option C. aligned to the true north.
Correct Answer is. aligned to the aircraft structure.
Explanation. Jeppesen Avionics Fundamentals Page.

Option C. 60.
Correct Answer is. 60.
Explanation. Probably referring to transponder transmit and reply frequencies of 1030 and 1090 Mega Hertz.

Question Number. 144. T.C.A.S 2 is.
Option A. 100 aircraft per 5 miles square.
Option B. 24 aircraft per 5 nautical mile radius.
Option C. 1 aircraft per square nautical mile.
Correct Answer is. 24 aircraft per 5 nautical mile radius.
Explanation. NIL. www.nak.no/flynytt/download/TCAS_II_V7.pdf

Question Number. 145. F.M.I in A.D.F mode, the pointer is moved by a.
Option A. servomotor.
Option B. loop voltage.
Option C. Chmaman.
Correct Answer is. loop voltage.
Explanation. NIL. www.eurocontrol.int/sma/SPG%20Positions%20documents/spg13p20-NDB.pdf

Question Number. 146. F.M.C changes movement via.
Option A. A/P actuator.
Option B. straight to the actuator.
Option C. flight control computer.
Correct Answer is. flight control computer.
Explanation. NIL.
Question Number. 147. Radio signals chance of penetration of ionosphere.
Option A. increase with the frequency.
Option B. is not affected by frequency.
Option C. decrease with frequency.
Correct Answer is. increase with the frequency.
Explanation. NIL.

Question Number. 148. In an amplitude modulated wave, the intelligence is contained in the.
Option A. sidebands and carrier equally.
Option B. carrier only.

Option A. to maintain Glide Slope signal.
Option B. to increase Glide Slope signal.
Option C. to decrease Glide Slope signal.
Correct Answer is. to increase Glide Slope signal.
Explanation. NIL.

Question Number. 163. If the inductance in a parallel tuned circuit is increased in value, the resonant frequency.
Option A. decreases.
Option B. increases.
Option C. remains the same.
Correct Answer is. decreases.
Explanation. NIL.

Question Number. 164. When an AM carrier is modulated, its bandwidth.
Option A. decreases.
Option B. increases.
Option C. remains the same.
Correct Answer is. decreases.
Explanation. NIL.

Question Number. 165. An inertial navigation unit uses pin programming for.
Option A. magnetic orientation.
Option B. aircraft type.
Option C. location.
Correct Answer is. location.
Explanation. Pin programming for IRU`s and INU`s are carried out on the aircraft rack mounted side. The purpose being to tell the installed unit which position it is serving within the aircraft i.e left, ctr or right side! The unit is universal for all.

Question Number. 166. In audio clipping.

Option B. the loop antenna.
Option C. both the sense and loop antenna.
Correct Answer is. the loop antenna.
Explanation. Aircraft Radio Systems by James Powell page 46.

Question Number. 191. Why is an aerial tuning unit used in a high frequency (H.F) communication system?.
Option A. To select the transmission/reception frequency in the H.F band.
Option B. To extend or retract the aerial and so vary its physical length.
Option C. To electrically lengthen or shorten the aerial for optimum matching of impedance.
Correct Answer is. To electrically lengthen or shorten the aerial for optimum matching of impedance.
Explanation. NIL. http://airspace.dial.pipex.com/town/pipexdsl/r/arar93/mds975/Content/aerials2.html

Question Number. 192. In an A.D.F system, the goniometer.
Option A. effectively simulates a rotating loop antenna.
Option B. alternately selects signals from loop antenna and sense antenna.
Option C. combines the signals from fixed loop antenna and sense antenna.
Correct Answer is. effectively simulates a rotating loop antenna.
Explanation. Aircraft Radio Systems by James Powell page 46.

Question Number. 193. What would be the purpose of an input from an inertial reference system being connected to a weather radar?.
Option A. To ensure that there is no radar transmission with aircraft on ground.
Option B. To place the weather radar target in azimuth and distance for the display.
Option C. To provide stabilisation for the radar antenna.
Correct Answer is. To provide stabilisation for the radar antenna.
Explanation. NIL. http://www.artietheairplane.com/radar.htm

Question Number. 194. In an aircraft VOR receiver.
Option A. 30 Hertz modulated reference signal is compared with 30 Hertz variable phase signal.

Option B. 108 Mega Hertz reference signal is compared with 9960 Hertz variable phase signal.
Option C. 30 Hertz reference signal is compared with 9960 Hertz variable phase signal.
Correct Answer is. 30 Hertz modulated reference signal is compared with 30 Hertz variable phase signal.
Explanation. Aircraft Radio Systems by James Powell page 59.

Question Number. 195. Which systems provide envelope modulation information for a Ground Proximity Warning System (G.P.W.S).
Option A. Autothrottle.
Option B. Flaps/undercarriage.
Option C. Rudder/ailerons.
Correct Answer is. Flaps/undercarriage.
Explanation. NIL.

Question Number. 196. In CVOR, 9960 c/s AM subcarrier is used in the.
Option A. REF phase.
Option B. VAR phase.
Option C. station identification Morse code.
Correct Answer is. REF phase.
Explanation. Aircraft Radio Systems by James Powell page 59/62.

Question Number. 197. The DVOR is preferred in comparison to CVOR because.
Option A. DVOR ground installation is relatively simpler.
Option B. DVOR is compatible for digital processing.
Option C. DVOR is relatively insensitive to SITE errors.
Correct Answer is. DVOR is relatively insensitive to SITE errors.
Explanation. Aircraft Radio Systems by James Powell page 61.

Question Number. 198. A secondary surveillance radar (SSR) interrogation operates on.
Option A. a frequency of 1030 Mega Hertz and pulse spacing depending on mode of interrogation.
Option B. a frequency of 1030 Mega Hertz and pulse spacing of 20.3 microseconds.

Option B. reverse R1+R2 and S1+S2 connections.
Option C. reverse R1+R2 connections only.
Correct Answer is. reverse R1+R2 connections only.
Explanation. NIL.

Question Number. 207. In an I.R.S system you would expect to find.
Option A. an azimuth gyro system.
Option B. three strap down accelerometers.
Option C. ring laser gyros.
Correct Answer is. ring laser gyros.
Explanation. Assuming they mean a strapdown system. (Note: in b, it is the system which is strapdown, not the accelerometers, in c, azimuth gyro is not the only type of gyro involved).

Question Number. 208. The mode S squitter pulse will.
Option A. contain the aircraft range and altitude information.
Option B. contain the aircraft identity.
Option C. trigger the T.C.A.S mode S all call interrogation.
Correct Answer is. contain the aircraft identity.
Explanation. NIL.

Question Number. 209. In an I.N.S system the accelerometer is a mass.
Option A. a mass suspended in free air.
Option B. suspended between two springs in a tube.
Option C. a remotely mounted mass on the airframe.
Correct Answer is. suspended between two springs in a tube.
Explanation. Aircraft Instruments and Integrated Systems Pallett Page 256. (Note: the mass is suspended in fluid, and is not remote).

Question Number. 210. When using the G.P.S.
Option A. the database card must be replaced every 28 days.
Option B. once the database card has expired the system will continue to operate with a warning message.

Question Number. 274. The laser ring gyro.
Option A. does not have gimbal and rotating parts.
Option B. does not have gimbal.
Option C. has a stabilized platform.
Correct Answer is. does not have gimbal and rotating parts.
Explanation. Aircraft Electricity and Electronics 5th Ed. Eismin Page 373.

Question Number. 275. Radio waves are said to have line-of-sight propagation.
Option A. from about 10 Mega Hertz upwards.
Option B. above about 100Mega Hertz.
Option C. not below 1000Mega Hertz.
Correct Answer is. above about 100Mega Hertz.
Explanation. NIL.

Question Number. 276. V.H.F transmitter output impedance to match with antenna for maximum power transfer is.

Option A. 129 ohms.
Option B. 25 to 75 ohms.
Option C. 50 ohms.
Correct Answer is. 50 ohms.
Explanation. Aircraft Radio Systems, Powell Pages 28 and 30.
Question Number. 277. A valid interrogation will.
Option A. disable the R, disable the encoder and enable the D.M.E.
Option B. enable the R, disable the encoder and disable the D.M.E.
Option C. disable the R, enable the encoder and disable the D.M.E.
Correct Answer is. disable the R, enable the encoder and disable the D.M.E.
Explanation. Aircraft Radio Systems Powell Page 128.

Question Number. 278. To check side lobe suppression.
Option A. select A.T.C on ASP.
Option B. carry out a self test.
Option C. use a ramp test set.
Correct Answer is. use a ramp test set.
Explanation. NIL.

Question Number. 284. With an A.T.C code of 0600 selected, the pulses transmitted are.
Option A. B0 and B6.
Option B. B2 and B4.
Option C. B1 and B5.
Correct Answer is. B2 and B4.
Explanation. Aircraft Radio Systems, Powell, page 123 Table 8.1.

Question Number. 285. What is needed for RHO-RHO navigation?.
Option A. 1 VOR and 1 D.M.E signals.
Option B. 1 VOR/D.M.E signal.
Option C. 2 D.M.E signals.
Correct Answer is. 2 D.M.E signals.
Explanation. NIL.

Question Number. 286. The relationship between LORAN master and slave transmitters. Master frequency is.
Option A. same as slave.
Option B. higher than slave.
Option C. lower than slave.
Correct Answer is. same as slave.
Explanation. Aircraft Radio Systems, Powell, page 101.

Question Number. 287. The loop aerial polar diagram is a.
Option A. cardioid.
Option B. figure 8.
Option C. circle.
Correct Answer is. figure 8.
Explanation. Aircraft Radio Systems, Powell, pages 46 & 47.

Question Number. 288. Single Side Band filters are.
Option A. 3Kilo Hertz.
Option B. 1Kilo Hertz.
Option C. 6Kilo Hertz.
Correct Answer is. 3Kilo Hertz.
Explanation. NIL.

Explanation. NIL.

Question Number. 336. Aircraft is 9000feet. When is it out of V.H.F range?.
Option A. 120 nm.
Option B. 100 nm.
Option C. 140 nm.
Correct Answer is. 120 nm.
Explanation. 1.25 * square root of altitude.

Question Number. 337. EVR is unserviceable.
Option A. The aircraft can fly for 72 hours since unserviceability.
Option B. The aircraft cannot fly unless required data is recorded by FDR.
Option C. The aircraft can fly for 4 days since unserviceability.
Correct Answer is. The aircraft can fly for 72 hours since unserviceability.
Explanation. 737 NG MEL 23-10.

Question Number. 338. Before processing an AM USB signal, what needs to be done?.
Option A. Carrier removed.
Option B. Carrier added.
Option C. Carrier integrated.
Correct Answer is. Carrier added.
Explanation. NIL.

Question Number. 339. On power up, IRS.
Option A. compares longitude from previous position.
Option B. obtains both from previous position.
Option C. obtains latitude from previous position.
Correct Answer is. compares longitude from previous position.
Explanation. NIL.

Correct Answer is. ONSIDE V.H.F T/R.
Explanation. NIL.

Question Number. 355. Peak power = 10kW, duty cycle =2.4ms, pulse duration =6 microseconds. What is mean power?
Option A. Approximately 4 W.
Option B. 14 W.
Option C. 24 W.
Correct Answer is. 14 W.
Explanation. NIL.

Question Number. 356. The flight data recorder underwater locator beacon operates at a frequency of thirty seven kilo-hertz.
Option A. and is able to withstand immersion to twenty thousand metres.
Option B. with an operational time of at least thirty days.
Option C. and has a maximum detection range of two thousand to four thousand feet.
Correct Answer is. with an operational time of at least thirty days.
Explanation. CAA Airworthiness spec no 12, para 2 e/f...acoustic operating life not less than 30 days, or answer b by A300-600 A.M.M 31-31-00 pg 17.

Question Number. 357. A resistance-capacitor low pass filter will have.
Option A. both resistance and capacitor in parallel.
Option B. the out put taken across the capacitor.
Option C. the output taken across the resistor.
Correct Answer is. the out put taken across the capacitor.
Explanation. NIL.

Question Number. 358. Buffer amplifiers are used when.
Option A. an impedance change (high to low) is required.
Option B. an impedance change (low to high) is required.
Option C. high amplification factors are required.
Correct Answer is. high amplification factors are required.

Option C. changing the antenna orientation with phased signal control.
Correct Answer is. varying the modulating frequency of each system.
Explanation. Aircraft Radio Systems Powell Page 199.

Question Number. 364. In a Loran navigation system, master station transmitter frequency.
Option A. lower than the slave.
Option B. higher than the slave.
Option C. the same as the slave.
Correct Answer is. the same as the slave.
Explanation. Aircraft Radio Systems, Powell, page 101.

Question Number. 365. Data communication between the aircraft and the operational control centre is possible through.

Option A. ACARS system.
Option B. satcom system.
Option C. selcal system.
Correct Answer is. ACARS system.
Explanation. NIL.

Question Number. 366. Communication between the aircraft earth station (AES) and the satellite is on.
Option A. S band.
Option B. C band.
Option C. L band.
Correct Answer is. L band.
Explanation. NIL.

Question Number. 368. In an interrogator Mode S addressing format when does the first sync phase reversal occur?.

Option A. 2.75 μ seconds after P2.
Option B. 1.25 μ seconds after P2.
Option C. 0.8 μ seconds after P2.
Correct Answer is. 2.75 μ seconds after P2.

Question Number. 416. The type of gyro generally used in an IN system is a.
Option A. rate integrating gyro.
Option B. displacement gyro.
Option C. rate gyro.
Correct Answer is. rate integrating gyro.
Explanation. Flight Instruments and Automatic Flight Control, David Harris Page 77.

Question Number. 417. Earth rate is approximately.
Option A. 15 degrees per hour.
Option B. 84 degrees per hour.
Option C. 5 degrees per hour.
Correct Answer is. 15 degrees per hour.
Explanation. Flight Instruments and Automatic Flight Control, David Harris Page 37.

Question Number. 418. In a gimbal system, the stable platform is the.
Option A. azimuth gimbal.
Option B. pitch gimbal.
Option C. roll gimbal.
Correct Answer is. azimuth gimbal.
Explanation. Flight Instruments and Automatic Flight Control, David Harris Page 77/78.

Question Number. 419. To prevent gimbal lock on the stable platform it is normal to use.
Option A. a pitch gimbal.
Option B. three gimbals.
Option C. four gimbals.
Correct Answer is. four gimbals.
Explanation. NIL.

Question Number. 420. When the inertial platform is torqued to perform like a Schuler pendulum.
Option A. the platform remains fixed with respect to the local vertical.
Option B. the platform oscillates with respect to the local vertical.
Option C. the platform rotates with respect to the aircraft.
Correct Answer is. the platform oscillates with respect to the local vertical.
Explanation. Flight Instruments and Automatic Flight Control, David Harris Page 86.

Question Number. 426. A basic I.N.S. platform has.
Option A. 2 accelerometers and 3 gyros.
Option B. 3 axis accelerometer.
Option C. 3 accelerometers and 2 gyros (pitch and roll).
Correct Answer is. 2 accelerometers and 3 gyros.
Explanation. Flight Instruments and Automatic Flight Control, David Harris Page 78.

Question Number. 427. Using I.N.S. an aircraft flies
Option A. rhumb line.
Option B. course directed by ground station.
Option C. great circle arc.
Correct Answer is. great circle arc.
Explanation. Flight Instruments and Automatic Flight Control, David Harris Page 81.

Question Number. 428. What must be entered in to the I.N.S. before the aircraft moves?.
Option A. E.T.A.
Option B. Waypoints.
Option C. Present position.
Correct Answer is. Present position.
Explanation. NIL.

Question Number. 429. Selection of the I.N.S Mode Selector Unit (MSU) to Attitude REF is made.
Option A. when attitude information is lost.
Option B. when navigation information is lost.
Option C. to feed information to the Captain and 1st Officers ADI displays.
Correct Answer is. when navigation information is lost.
Explanation. Flight Instruments and Automatic Flight Control, David Harris Page 85.

Question Number. 430. For the INS, the Battery Unit provides.
Option A. standby power when airborne, switched by weight-off switches in the undercarriage.
Option B. standby power only when on the ground, to maintain the alignment phase.
Option C. both when airborne and on the ground.
Correct Answer is. both when airborne and on the ground.
Explanation. Flight Instruments and Automatic Flight Control, David Harris Page 85.

Question Number. 126. If an aircraft has no battery charger, the battery is charged by.
Option A. constant current.
Option B. constant current until a predetermined limit when it.
Option C. automatically switches to constant voltage constant voltage.
Correct Answer is. constant voltage.
Explanation. NIL.

Question Number. 127. In the event of complete AC generator failure in an AC split bus-bar generation system, how is power maintained to the essential AC bus-bar?.
Option A. By power fed from static inverter only.
Option B. By power fed from a hot battery bus-bar only.
Option C. By power fed from a battery supplied static inverter.
Correct Answer is. By power fed from a battery supplied static inverter.
Explanation. Aircraft Electrical Systems Pallett Page 78 Figure. 5.2.

Question Number. 128. Battery charging procedures can be found in ATA.
Option A. Chapter 31 Section 21.
Option B. Chapter 24 Section 31.
Option C. Chapter 24 Section 21.
Correct Answer is. Chapter 24 Section 31.
Explanation. NIL.

Question Number. 129. In a carbon pile regulator, the resistive element is.
Option A. in parallel with the field and changes resistance with changing length.
Option B. in series with the field and changes resistance with surface area contact.
Option C. in series with the field and changes resistance with changing length.
Correct Answer is. in series with the field and changes resistance with surface area contact.
Explanation. CAIPs E.E.L/1-2 3.1.

Question Number. 130. In what units are static inverters rated?.
Option A. kVAR.

Option B. kW.
Option C. kVA.
Correct Answer is. kVA.
Explanation. VA or KVA, just like an AC generator.

Question Number. 131. The output of a carbon pile regulator with no variation of loading is.
Option A. pulse width modulating.
Option B. stationary.
Option C. fluctuating.
Correct Answer is. stationary.
Explanation. CAIPs E.E.L/1-2

Question Number. 132. In a transistor voltage regulator, the voltage output is controlled by.
Option A. transformers and transistors.
Option B. diodes and transformers.
Option C. zeners and transistors.
Correct Answer is. zeners and transistors.
Explanation. CAIPs E.E.L/1-2 3.3.1.

Question Number. 133. Paralleled relay for DC system is energised and connected by.
Option A. voltage coil.
Option B. voltage and current coil.
Option C. current coil.
Correct Answer is. voltage and current coil.
Explanation. Aircraft Electrical Systems by Pallett page 70/71 fig 4.5.

Question Number. 134. Increasing the real load primarily.
Option A. decreases output voltage.
Option B. decreases frequency.
Option C. increases output voltage and increases frequency.

Option B. restriction valve.
Option C. IDG.
Correct Answer is. angle of swash plate.
Explanation. NIL.

Question Number. 140. How is real and reactive load sharing achieved in an AC parallel generator system?.
Option A. Real and reactive loads by control of the constant speed drives only. Output voltage is controlled by adjustment of generator fields.
Option B. Real load by control of generator fields. Reactive loads by adjustment of the constant speed drives.
Option C. Real load by control of the constant speed drives, reactive load by adjustment of generator fields.
Correct Answer is. Real load by control of the constant speed drives, reactive load by adjustment of generator fields.
Explanation. Aircraft Electrical Systems Pallett page 48 and 49.

Question Number. 141. Differential protection in an AC system protects against.
Option A. line-line, line-line-line, line-earth faults.
Option B. A reverse current flowing from the battery.
Option C. short circuits.
Correct Answer is. line-line, line-line-line, line-earth faults.
Explanation. NIL.

Question Number. 142. When resetting the CSD on the ground, the engine should be.
Option A. stationary.
Option B. rotating at idle.
Option C. rotating at Nsync.
Correct Answer is. stationary.
Explanation. Aircraft Electrical Systems Pallett page 40.

Question Number. 143. One of the main purposes of a CSD is to.
Option A. maintain constant load on the generator.

Correct Answer is. aircraft with 3 or more engines.
Explanation. Aircraft Electricity and Electronics (Fifth edition), Eismin, page 238.

Question Number. 161. Aircraft generators are connected in.
Option A. series to the busbar, series to the load and the loads parallel to each other.
Option B. series to the busbar, parallel to the load and the loads parallel to each other.
Option C. parallel to the busbar, series to the load and the loads parallel to each other.
Correct Answer is. series to the busbar, series to the load and the loads parallel to each other.
Explanation. Aircraft Electricity and electronics, (Fifth edition), Eismin, page 235, figure 12-4.

Question Number. 162. Non-essential loads such as galleys and cabin lighting operate from the.
Option A. Ground handling bus.
Option B. Ground services bus.
Option C. Transfer bus.
Correct Answer is. Transfer bus.
Explanation. Boeing System.

Question Number. 163. The generator warning light will come on when.
Option A. voltage is too high.
Option B. voltage is above battery voltage.
Option C. voltage is below battery voltage.
Correct Answer is. voltage is below battery voltage.
Explanation. NIL.

Question Number. 164. When replacing a current transformer.
Option A. it can only be fitted one way round.
Option B. voltage/current selection must be made prior to fitting.
Option C. it can be fitted any way round.
Correct Answer is. it can only be fitted one way round.
Explanation. NIL.

Question Number. 165. The economy coil on a relay.
Option A. reduces current required to hold closed.
Option B. reduces current required to close.
Option C. makes it cheaper to make.

Correct Answer is. each generator supplies its own bus and distribution system in normal operation.
Explanation. NIL.

Question Number. 171. Flashing a generator field.
Option A. increases resistance.
Option B. restores magnetism.
Option C. decreases resistance.
Correct Answer is. restores magnetism.
Explanation. NIL.

Question Number. 172. When checking SG of electrolyte of lead acid battery, what should be taken into account?.
Option A. Electrolyte temperature.
Option B. Battery charge.
Option C. Ambient temperature.
Correct Answer is. Electrolyte temperature.
Explanation. E.E.L/1-1 4.3.4.

Question Number. 173. How do you check condition of Ni-Cad battery in situ?.
Option A. By voltmeter connected to the battery terminal.
Option B. By voltmeter in the cockpit when battery is off load.
Option C. By voltmeter in the cockpit, when battery is on load.
Correct Answer is. By voltmeter in the cockpit, when battery is on load.
Explanation. Aircraft Electrical Systems, Pallett Page 23.

Question Number. 174. The reactive load circuit in a multi-engined AC generator system.
Option A. modifies generator drive speed.
Option B. modifies generator field excitation voltage.
Option C. modifies generator field excitation current.
Correct Answer is. modifies generator field excitation current.
Explanation. Aircraft Electrical Systems, Pallett Page 49.

Question Number. 175. A vibrating type voltage regulator uses a volts coil.
Option A. in series with the current coil.
Option B. in parallel with the generator output.
Option C. in series with the generator output.

Correct Answer is. excited by DC.
Explanation. NIL.

Question Number. 190. The equalizing coILS on voltage regulators will.
Option A. have current passing through them only when the generators are not paralleled.
Option B. be connected to each other when the generators are paralleled.
Option C. have current passing through them from the higher loaded generator to the lower.
Correct Answer is. have current passing through them from the higher loaded.
Explanation. Aircraft Electricity and Electronics Thomas Eismin 5th Edition page 200.

Question Number. 191. A fully charged lead-acid battery will not freeze until extremely low temperatures are reached because.
Option A. most of the acid is in the solution.
Option B. the acid is in the plates, thereby increasing the specific gravity of the solution.
Option C. increased internal resistance generates sufficient heat to prevent freezing.
Correct Answer is. most of the acid is in the solution.
Explanation. CAIPs E.E.L/1-1 4.6.2.
Question Number. 192. What determines the amount of current which will flow through a battery while it is being charged by a constant voltage source?.
Option A. The ampere-hour capacity of the battery.
Option B. The total plate area of the battery.
Option C. The state-of-charge of the battery.
Correct Answer is. The state-of-charge of the battery.
Explanation. NIL.

Question Number. 193. The method used to rapidly charge a nickel-cadmium battery utilizes.
Option A. constant current and varying voltage.
Option B. constant voltage and varying current.
Option C. constant current and constant voltage.
Correct Answer is. constant voltage and varying current.
Explanation. Aircraft Electricity and Electronics Eismin Page 52. CAIPs E.E.L/1-3 4.5.1.

Question Number. 194. The presence of small amounts of potassium carbonate deposits on the top of nickel-cadmium battery cells that have been in service for time is an indication of.
Option A. excessive plate sulphation.
Option B. normal operation.
Option C. excessive gassing.
Correct Answer is. excessive gassing.
Explanation. Aircraft Electrical Systems Page 23 and Aircraft Electricity and Electronics Eismin Page 50 but see also CAIPs E.E.L/1-3 4.2 (h).

Question Number. 195. The servicing and charging of nickel-cadmium and lead-acid batteries together in the same service area is likely to result in.
Option A. contamination of both types of batteries.
Option B. normal battery service life.
Option C. increased explosion and/or fire hazard.
Correct Answer is. contamination of both types of batteries.
Explanation. CAIPs E.E.L/2-1 Page 1 Para 2.11.

Question Number. 196. If the current drawn from No.1 generator of a twin generator DC system is less than that drawn from No.2 generator, the current in the No.2 generator equalizing coil will flow.
Option A. in the same direction as the current flow in the voltage coil, increasing the output of No.2 generator.
Option B. in the opposite direction to the current flow in the voltage coil, reducing the output of No.2 generator.
Option C. in the same direction as the current flow in the voltage coil, reducing the output of No.2 generator.
Correct Answer is. in the same direction as the current flow in the voltage coil, reducing the output of No.2 generator.
Explanation. CAIPs E.E.L/1-3 4.2 (h).

Question Number. 197. On a C.S. driven generator, operation of the Disconnect Solenoid will disconnect the generator drive and.
Option A. it can only be reset when all loads are switched off.
Option B. it will automatically reset itself when the fault is rectified.
Option C. resetting can only be carried out on the ground.
Correct Answer is. resetting can only be carried out on the ground.
Explanation. NIL.

Question Number. 202. The purpose of an inverter is to convert.
Option A. AC to a higher frequency AC.
Option B. DC to AC.
Option C. AC to DC.
Correct Answer is. DC to AC.
Explanation. NIL.

Question Number. 203. What is the purpose of the current transformer on a Neutral phase of an AC generator?.
Option A. Negative phase sequencing.
Option B. Differential protection.
Option C. Open phase.
Correct Answer is. Differential protection.
Explanation. NIL.

Question Number. 204. How can the state-of-charge of a nickel-cadmium battery be determined?.
Option A. By the level of the electrolyte.
Option B. By measuring the specific gravity of the electrolyte.
Option C. By measuring discharge.
Correct Answer is. By measuring discharge.
Explanation. CAIPs E.E.L/1-3 4.5.6.

Question Number. 205. What may result if water is added to a nickel-cadmium battery when it is not fully charged?.
Option A. Excessive spewing will occur during the charging cycle.
Option B. The cell temperature will run too low for proper output.
Option C. No adverse results since water may be added anytime.
Correct Answer is. Excessive spewing will occur during the charging cycle.
Explanation. CAIPs E.E.L/1-3 4.3.

Question Number. 206. How do you reset a GCR trip?.

Question Number. 220. The only practical method of maintaining a constant voltage output from an aircraft generator under varying conditions of speed and load is to vary the.
Option A. number of conductors in the armature.
Option B. strength of the magnetic field.
Option C. speed at which the armature rotates.
Correct Answer is. strength of the magnetic field.
Explanation. NIL.

Question Number. 221. As the generator load is increased (within its rated capacity), the voltage will.
Option A. remain constant and the amperage output will decrease.
Option B. decrease and the amperage output will increase.
Option C. remain constant and the amperage output will increase.
Correct Answer is. decrease and the amperage output will increase.
Explanation. Assuming no voltage regulator is considered, otherwise b is the answer.

Question Number. 222. When checking the specific gravity of the electrolyte in a battery.
Option A. each cell should be checked as the readings may differ.
Option B. one cell only need be checked as the remainder will read the same.
Option C. only the end cells need be checked as they contain the terminals.
Correct Answer is. each cell should be checked as the readings may differ.
Explanation. NIL.

Question Number. 223. A lead-acid battery is considered to be fully charged when the.
Option A. S.G. reaches 1.180.
Option B. cells begin to gas freely.
Option C. S.G. and voltage remain constant for specified period.
Correct Answer is. S.G. and voltage remain constant for specified period.
Explanation. CAIPs E.E.L/1-1 4.7.

Question Number. 224. Which aircraft circuit would be most likely to use frequency wild 200 V AC?.
Option A. Hydraulic pump.
Option B. Windscreen heating.

Option C. Standby compass.
Correct Answer is. Windscreen heating.
Explanation. Any heating or lighting circuit can be frequency wild.

Question Number. 225. To prevent corrosion at the terminals of a lead-acid battery.
Option A. petroleum jelly may be applied to the connections.
Option B. the connectors may be painted.
Option C. copper connectors are used.
Correct Answer is. petroleum jelly may be applied to the connections.
Explanation. CAIPs E.E.L/1-1 4.2 (vi).

Question Number. 226. Before taking S.G. readings of a lead-acid battery recently removed from an aircraft.
Option A. the electrolyte temperature must be noted.
Option B. the battery must be charged at the 10 hour rate for one hour.
Option C. a period of 1 hour should have elapsed to allow the S.G. to stabilize.
Correct Answer is. the electrolyte temperature must be noted.
Explanation. NIL.

Question Number. 227. The output of a DC generator is controlled by varying the.
Option A. armature current.
Option B. field current.
Option C. engine speed.
Correct Answer is. field current.
Explanation. NIL.

Question Number. 228. A generator rated at 30 kVA power factor 0.8 has a maximum continuous power output of.
Option A. 37.5 kW.
Option B. 30 kW.
Option C. 24 kW.
Correct Answer is. 24 kW.
Explanation. PF = TP/AP 0.8 = TP/30 TP = 24.

Question Number. 229. The specific gravity of the electrolyte in a lead-acid battery.
Option A. remains constant with changes in the state of charge but is a useful guide to the amount of acid contained in the electrolyte.

Question Number. 10. When working on an hydraulic operated flight control, it is sensible to.
Option A. remove/disconnect hydraulic power.
Option B. pull the appropriate CB.
Option C. remove/disconnect electrical power.
Correct Answer is. remove/disconnect hydraulic power.
Explanation. Removing/disconnect hydraulic power will ensure that the system is safe.

Question Number. 11. On the ground, roll-spoilers/speedbrakes deploy to.
Option A. 30°.
Option B. 60°.
Option C. 15°.
Correct Answer is. 60°.
Explanation. Transport Category Aircraft Systems Jeppesen Page 5-6. In the air - 30 degrees and a further 15 degrees with ailerons.

Question Number. 12. A manual trim wheel, when fully moved in the direction of the tail.
Option A. the authority of the elevators not effected.
Option B. the up movement authority of the elevators is effected.
Option C. the down movement authority of the elevators is effected.
Correct Answer is. the up movement authority of the elevators is effected.
Explanation. Moving the wheel back moves the trim surface DOWN, which moves the elevator surface UP and reduces the range available to the pilot in that direction.

Question Number. 13. During a left turn.
Option A. right rudder to be used.
Option B. left rudder to be used.
Option C. ball is to be maintained in centre of turn and slip indicator.
Correct Answer is. ball is to be maintained in centre of turn and slip indicator.
Explanation. Normally a small amount of rudder is used to produce a more coordinated turn.

Question Number. 14. The cyclic stick in an helicopter is.
Option A. in the centre.

Question Number. 23. Medium vibration of 4 to 6 times per revolution is experienced on a helicopter. The primary control method is.
Option A. design of engine and gearbox supports.
Option B. inspect main rotor head and main drive shaft.
Option C. inspect loose fixtures and fittings.
Correct Answer is. design of engine and gearbox supports.
Explanation. Engine and gearbox rotate faster than the rotor.

Question Number. 24. To avoid moment bending the root of the wing, the aircraft will be fitted with.
Option A. automatic trim control for controlled turns and rudder movements.
Option B. symmetrical flight control trim.
Option C. integrated fuel monitoring system.
Correct Answer is. symmetrical flight control trim.
Explanation. Probably referring to Load Alleviation Function. Jeppesen Transport Category Aircraft Systems Page 5-29.

Question Number. 25. 'Q' feel for the stabiliser requires.
Option A. pitot and static.
Option B. pitot only.
Option C. static only.
Correct Answer is. pitot and static.
Explanation. NIL.

Question Number. 26. When the aircraft nose yaws to the left, the yaw damper will apply corrective rudder to.
Option A. the left.
Option B. the right.
Option C. the left with some aileron assistance.
Correct Answer is. the right.
Explanation. NIL.

Question Number. 27. A yaw damper gain could be fitted with.
Option A. decreases sensitivity for decreased speed.

Option B. gives a short period of extra lift to assist take off.
Option C. vibrates the control column near stalling speed.
Correct Answer is. vibrates the control column near stalling speed.
Explanation. NIL.

Question Number. 74. An anti-balance tab is moved.
Option A. when the C.G. changes.
Option B. hydraulically.
Option C. via a fixed linkage.
Correct Answer is. via a fixed linkage.
Explanation. NIL.

Question Number. 75. A servo tab is operated.
Option A. by a trim wheel and moves in the opposite direction to the main control surfaces when moved.
Option B. automatically, and moves in the same direction as the main control surfaces.
Option C. directly by the pilot to produce forces which in turn move the main control surfaces.
Correct Answer is. directly by the pilot to produce forces which in turn move the main control surfaces.
Explanation. Jeppesen A&P Technician Airframe Textbook Page 23.

Question Number. 76. Gust Load Alleviation Function in a FLY BY WIRE system.
Option A. uses the high speed computer responses to compensate for sudden gusts.
Option B. is achieved by the weight saving from elimination of cables, feel units and other conventional items.
Option C. may be controlled by the elevators.
Correct Answer is. uses the high speed computer responses to compensate for sudden gusts.
Explanation. NIL.

Question Number. 77. Active load control on a large transport aircraft's aileron system is fitted to.
Option A. improve fatigue life, due to aeroelasticity and high lift loads.
Option B. improve trim control due to lateral centre of gravity changes.
Option C. increase roll control authority of the autopilot.
Correct Answer is. improve fatigue life, due to aeroelasticity and high lift loads.
Explanation. NIL.

Question Number. 78. Powered flying control actuators.
Option A. transmit pilot input to the control surfaces.

Question Number. 36. Stab trim goes into high speed mode when.
Option A. Flaps are retracted.
Option B. cruise altitude is reached.
Option C. Flaps are extended.
Correct Answer is. Flaps are extended.
Explanation. Automatic Flight Control. Pallett. Page 215 fig 7.8, and page 219.

Question Number. 37. The FLY BY WIRE system uses two elevator and aileron computers (E.L.A.Cs),.
Option A. this is to provide redundancy.
Option B. each computer achieves control and monitoring of the three electric motors which power the trimmable horizontal stabiliser (THS).
Option C. they provide alternate control of the elevators if spoiler and elevator computers (SECs) fail.
Correct Answer is. this is to provide redundancy.
Explanation. Automatic Flight Control, Pallett, page 294/295 & figure.11.1.

Question Number. 38. What achieves control and monitoring of the three electric motors which power the trimmable horizontal stabiliser (THS).
Option A. flap and computer stall margin speed circuits to maintain the correct angle of attack within the stall margin.
Option B. flap position sensors to maintain the minimum safe approach speed.
Option C. landing gear position sensors to maintain the aircraft speed above stall.
Correct Answer is. flap position sensors to maintain the minimum safe approach speed.
Explanation. Automatic Flight Control Pallett Page 288.

Question Number. 39. A versine signal is typically fed from the roll channel.
Option A. and modified by True Air Speed (TAS) and flap position signals to adjust for loss of lift during a turn.
Option B. and modified by aircraft attitude and pitch rate signals to limit the pitch angle during approach.
Option C. to adjust the roll angle to suit the approach turn during autoland.
Correct Answer is. and modified by True Air Speed (TAS) and flap position signals to adjust for loss of lift during a turn.
Explanation. NIL.

Option A. indicated air speed and total air temperature.
Option B. pitot and static pressures.
Option C. indicated airspeed and altitude.
Correct Answer is. indicated airspeed and altitude.
Explanation. NIL.

Question Number. 4. In a Central Air Data Computer (ADC), the rate of climb of an aircraft is produced in the.
Option A. Indicated Airspeed Module.
Option B. Mach Module.
Option C. Altitude Module.
Correct Answer is. Altitude Module.
Explanation. NIL.

Question Number. 5. In a Central Air Data Computer, altitude is produced from.
Option A. pitot air pressure.
Option B. pitot air pressure and total air temperature.
Option C. static air pressure.
Correct Answer is. static air pressure.
Explanation. NIL.

Question Number. 6. In a Central Air Data Computer (ADC), Indicated Air Speed (IAS) is produced from.
Option A. static pressure only.
Option B. pitot pressure only.
Option C. pitot and static air pressure.
Correct Answer is. pitot and static air pressure.
Explanation. NIL.

Question Number. 7. In a Central Air Data Computer (CADC) system, True Air Speed (TAS) is derived from the Mach information and.
Option A. Pitot Air Pressure.

Option B. 400feet.
Option C. 80feet.
Correct Answer is. 80feet.
Explanation. JAA Administrative and Guidance Material Temporary Guidance Leaflet No.6 Para 7.3.3.

Question Number. 13. The runway heading is.
Option A. QFU.
Option B. QDM.
Option C. QDR.
Correct Answer is. QFU.
Explanation. NIL. http://www2.tky.3web.ne.jp/~jahta/kokuningen/Q.html

Question Number. 14. An aircraft in climb maintains the same I.A.S. What is it's true airspeed?.
Option A. The same as its I.A.S.
Option B. Higher than its I.A.S.
Option C. Lower than its I.A.S.
Correct Answer is. Higher than its I.A.S.
Explanation. True Air Speed is I.A.S corrected for density. True Air Speed is greater than I.A.S at altitude.
Question Number. 15. Apparent drift of a vertical gyro is a function of.
Option A. sin of latitude.
Option B. tan of latitude.
Option C. cos of latitude.
Correct Answer is. cos of latitude.
Explanation. Pallett Aircraft Instruments and Integrated Systems Page 103.

Question Number. 16. For a vertical gyro which is moved in pitch, which gimbol would be moved to correct the pitch movement?.
Option A. Normal.
Option B. Longitudinal.
Option C. Lateral.
Correct Answer is. Longitudinal.
Explanation. Jeppesen, Avionics Fundamentals Page 91.

Question Number. 58. Duringa compass swing, using a datum compass, the error permitted in aligning the aircraft is.

Option A. 1 degree.
Option B. 10 degree.
Option C. 5 degree.
Correct Answer is. 5 degree.
Explanation. CAIPs A.L/10-5 Para 9.

Question Number. 59. In an FDS, the attitude gyro is coupled with the FD computer by means of transformer coupling. The purpose of this arrangement is.
Option A. to protect FD computer in case of attitude gyro failure.
Option B. to protect the attitude gyro in case of failure of FD computer.
Option C. to minimise power losses.
Correct Answer is. to protect the attitude gyro in case of failure of FD computer.
Explanation. NIL.

Question Number. 60. In a horizontal gyro, the random precession of the inner ring is corrected by.
Option A. mercury switches on the outer ring.
Option B. flux valve slaving.
Option C. mercury switches on the inner ring.
Correct Answer is. flux valve slaving.
Explanation. NIL.

Question Number. 61. Index error is.
Option A. Coefficient P.
Option B. misalignment of compass lubber line.
Option C. coefficient B.
Correct Answer is. misalignment of compass lubber line.
Explanation. CAIPs A.L/10-5 page 1.

Question Number. 62. When a radio altimeter reaches 2,500 feet. what happens to the display?.

Option A. a full test of the system should be carried out.
Option B. the allowances for the system should be halved.
Option C. a full test of the system should be carried out only if the aircraft manufacturer recommends to do so.
Correct Answer is. a full test of the system should be carried out.
Explanation. Download TGL No.6 at http://www2.eur-rvsm.com/library.htm PAra.8.3.

Question Number. 75. With a constant torque applied to a gyroscope, the rate of precession will.
Option A. decrease with a lower rotor speed.
Option B. decrease with a higher rotor speed.
Option C. increase with a higher rotor speed.
Correct Answer is. decrease with a higher rotor speed.
Explanation. Aircraft Instruments and Integrated Circuits. EHJ Pallett Page 99.

Question Number. 76. For aircraft certificated after 1997 and with RVSM, the maximum tolerance for the system would be.
Option A. +/-500 feet for the system overall.
Option B. +/-300 feet plus +/-50 feet for instrument errors.
Option C. +/-200 feet plus +/-50 feet for instrument error.
Correct Answer is. +/-200 feet plus +/-50 feet for instrument error.
Explanation. Download TGL No.6 at http://www2.eur-rvsm.com/library.htm PAra.8.3.
Question Number. 77. A gyroscope with a vertical spin axis has the roll torque motor located about the gyroscope's.

Option A. longitudinal axis.
Option B. lateral axis.
Option C. vertical axis.
Correct Answer is. lateral axis.
Explanation. Aircraft Instruments and Integrated Systems, Pallett page 117 fig 4.15.

Question Number. 78. The loss of the vertical gyro signal to a flight director system would cause.
Option A. aircraft to overbank.
Option B. aircraft to remain in level flight.

Option B. cannot be shortened.
Option C. can be shortened.
Correct Answer is. cannot be shortened.
Explanation. NIL.

Question Number. 107. How is temperature compensation achieved in the fluid of a compass?.
Option A. Press relief valve.
Option B. Bellows and diaphragm.
Option C. Alcohol is used as it does not get effected by temperature.
Correct Answer is. Bellows and diaphragm.
Explanation. NIL.

Question Number. 108. The apparent wander for directional gyros is.
Option A. maximum at the pole.
Option B. compensated by applying a constant torque.
Option C. dependant on longitude.
Correct Answer is. compensated by applying a constant torque.
Explanation. NIL.

Question Number. 109. What is lapse rate?.
Option A. Density changes with altitude.
Option B. Temperature changes with altitude.
Option C. Pressure changes with altitude.
Correct Answer is. Temperature changes with altitude.
Explanation. Aircraft Instruments and Integrated Systems, Pallett Page 27.

Question Number. 110. The Directional Gyro is checked every 15 minutes for.
Option A. erection.
Option B. drift.
Option C. toppling.

Question Number. 149. When a compass is in the slave mode.
Option A. the azimuth gyro is slaved to the annunciator or synchroniser circuit.
Option B. the azimuth gyro will wander uncompensated.
Option C. azimuth gyro will be corrected by long term monitoring of the flux valve.
Correct Answer is. azimuth gyro will be corrected by long term monitoring of the flux valve.
Explanation. Aircraft Radio Systems Powell Page 106.

Question Number. 150. A flux valve becomes permanently magnetized. What will be the effect?.
Option A. More deviation.
Option B. More variation.
Option C. Remote compass will indicate in one direction only.
Correct Answer is. More deviation.
Explanation. NIL.

Question Number. 151. At what height does the rising runway appear?.
Option A. 200 feet.
Option B. 500 feet.
Option C. 300 feet.
Correct Answer is. 200 feet.
Explanation. Aircraft Radio Systems Powell Page 199.

Question Number. 152. An H on the EHSI indicates.
Option A. VOR hold.
Option B. D.M.E hold.
Option C. ILS approach.
Correct Answer is. D.M.E hold.
Explanation. Aircraft Electricity and Electronics Eismin Page 358.
Question Number. 153. When servicing an RVSM aircraft.
Option A. the alt. alert must be serviceable.
Option B. the alt. hold must be serviceable.
Option C. all pitot/static instruments must be serviceable.
Correct Answer is. the alt. alert must be serviceable.

Explanation. IHums book for Super Puma AS332 Chap 31-32-00.

Question Number. 224. As part of the checks on the DFDR system, you are required to carry out a check using the self-test switch on the aircraft integrated data system (AIDS) printer. Actuation of the switch causes the printer to print in.
Option A. forty column mode.
Option B. eighty column mode.
Option C. sixty six column mode.
Correct Answer is. forty column mode.
Explanation. A320 MM chapter 31-36-00 page 17 para 4.

Question Number. 225. When the 'busy' indicator lamp flashes on the QAR in a DFDR system, this indicates that the.
Option A. cartridge is loaded correctly and the QAR is ready for use.
Option B. data is being received and the cartridge cannot be ejected.
Option C. data is not being received and the cartridge can be ejected.
Correct Answer is. cartridge is loaded correctly and the QAR is ready for use.
Explanation. NIL.

Question Number. 226. In digital flight data recorder (DFDR) system, low speed playback of currently received data can be achieved at.
Option A. the DFDAU built in test equipment (BITE).
Option B. the electronic bay test connection at the quick access recorder (QAR).
Option C. the flight compartment test connector through the digital flight data acquisition unit (DFDAU).
Correct Answer is. the electronic bay test connection at the quick access recorder (QAR).
Explanation. NIL.

Question Number. 227. During a change to a lower altitude, the piston unit in an IVSI (instantaneous vertical speed indicator) will create, for an instant.
Option A. more suction to the capsule only.
Option B. pressure to both case and capsule.
Option C. more pressure to the capsule only.
Correct Answer is. more pressure to the capsule only.
Explanation. NIL.

Option B. the spin axis is longitudinal.
Option C. the spin axis is vertical.
Correct Answer is. the spin axis is lateral.
Explanation. Flight Instruments and Automatic Flight Control, David Harris Page 53.

Question Number. 273. In an altimeter, the.
Option A. inside of the capsule is connected to static pressure.
Option B. capsule and case are connected via a calibrated choke.
Option C. capsule is evacuated and sealed.
Correct Answer is. capsule is evacuated and sealed.
Explanation. Flight Instruments and Automatic Flight Control, David Harris Page 6.

Question Number. 274. The units on the calibrated scale of a V.S.I. are expressed in.
Option A. knots (kts).
Option B. hundreds of feet per minute.
Option C. miles per hour (mph).
Correct Answer is. hundreds of feet per minute.
Explanation. (Light aircraft only - large aircraft are 1000s ft/min).

Question Number. 275. A standby air supply for gyro operation could be obtained from.
Option A. a tapping from the induction manifold.
Option B. a pitot head.
Option C. a venturi.
Correct Answer is. a venturi.
Explanation. Flight Instruments and Automatic Flight Control, David Harris Page 40.

Question Number. 276. At the lowest point of each vent line you would normally find a.
Option A. float valve.
Option B. NACA duct.
Option C. self draining non-return valve.
Correct Answer is. self draining non-return valve.
Explanation. NIL.

Question Number. 277. A rate two turn is.

Question Number. 297. With the gyro at normal running speed, a torque applied to the inner gimbal ring of a vertical gyro will cause the.
Option A. outer and inner ring to move.
Option B. outer ring to move.
Option C. inner ring to move.
Correct Answer is. outer ring to move.
Explanation. NIL.

Question Number. 298. When an aircraft is descending, the pressure in the altimeter case.
Option A. will cause the aneroid capsule to expand.
Option B. will cause the aneroid capsule to contract.
Option C. will not affect the aneroid capsule.
Correct Answer is. will cause the aneroid capsule to contract.
Explanation. Flight Instruments and Automatic Flight Control Systems, David Harris Page 5.

Question Number. 299. The supply of Desynn indicating system.
Option A. is alternating current at 400 c/s.
Option B. is direct current.
Option C. is alternating current at 50 c/s.
Correct Answer is. is direct current.
Explanation. NIL.

Question Number. 300. A sensitive altimeter reading 100 feet. when the millibar scale is set to the atmospheric pressure at airfield level (QFE).
Option A. indicates that the aircraft is in a region of high pressure and the reading must be corrected to I.S.A. standards.
Option B. indicates that the instrument is unserviceable.
Option C. indicates that the airfield is 100 feet. above sea level.
Correct Answer is. indicates that the instrument is unserviceable.
Explanation. Flight Instruments and Automatic Flight Control Systems, David Harris Page 9.

Question Number. 301. After using a pitot-static test set the pressure in the aircraft static system should be released to the atmosphere by.
Option A. removing the static connector from its static vent after waiting for a period of three minutes.
Option B. removing the static connector from its static vent.
Option C. venting the static system via an internal bleed in the test set.
Correct Answer is. venting the static system via an internal bleed in the test set.
Explanation. NIL.

Question Number. 302. An altimeter is operated.
Option A. by the pitot system.
Option B. by the vacuum system.
Option C. by the static system.
Correct Answer is. by the static system.
Explanation. NIL.

Question Number. 303. What is the purpose of the bimetallic strip in the altimeter?.
Option A. Compensates for change in density.
Option B. Corrects for capsule elasticity.
Option C. Compensates for non-linear tension in the hairspring.
Correct Answer is. Corrects for capsule elasticity.
Explanation. Flight Instruments and Automatic Flight Control Systems, David Harris Page 5.

Question Number. 304. Which axis does the directional gyro spin on?.
Option A. Horizontal.
Option B. Vertical.
Option C. Both vertical and horizontal.
Correct Answer is. Horizontal.
Explanation. Flight Instruments and Automatic Flight Control Systems, David Harris Page 8.

Question Number. 305. The capsule in an altimeter responds to.

Question Number. 326. With an aircraft on the ground and QNH set on the millibar scale of the altimeter, the altimeter will read.
Option A. off scale.
Option B. the airfield height.
Option C. zero.
Correct Answer is. the airfield height.
Explanation. Flight Instruments and Automatic Flight Control Systems, David Harris Page 9.

Question Number. 327. When checking a sensitive altimeter on a pre-flight inspection.
Option A. the ambient air pressure corrected for temperature is set on the millibar scale.
Option B. the standard sea level barometric pressure is always set on the millibar scale.
Option C. the ambient air pressure is set on the millibar scale.
Correct Answer is. the ambient air pressure is set on the millibar scale.
Explanation. QFE is set and it should read airfield height.

Question Number. 328. The HSI compass card is positioned by the.
Option A. heading select knob.
Option B. compass system.
Option C. aircraft A.D.F system.
Correct Answer is. compass system.
Explanation. NIL.

Question Number. 329. The applied pressure to an A.S.I. varies with the.
Option A. square of the speed.
Option B. cube root of the speed.
Option C. square root of the speed.
Correct Answer is. square of the speed.
Explanation. Flight Instruments and Automatic Flight Control Systems, David Harris Page 15.

Question Number. 334. If an aircraft flying in still air at 400 knots, encounters a head wind of 50 knots, its ground speed is.
Option A. 350 knots.
Option B. 400 knots.
Option C. 450 knots.
Correct Answer is. 350 knots.
Explanation. NIL.

Question Number. 335. To provide a linear scale on an A.S.I., a.
Option A. bi-metal corrector is employed.
Option B. 10 to 1 gearing is used.
Option C. ranging bar and screws are fitted.
Correct Answer is. ranging bar and screws are fitted.
Explanation. Aircraft Instruments and Integrated Systems Pallett Page 44 fig 2.18 and text below.

Question Number. 336. The moving element of a ratiometer has.
Option A. three coils.
Option B. two coils.
Option C. one coil.
Correct Answer is. two coils.
Explanation. Flight Instruments and Automatic Flight Control Systems Page 186 Fig 7.4 and para below.

Question Number. 337. When carrying out a pressure leak test on an altimeter, you are checking for leaks in the.

Option A. capsule stack.
Option B. instrument case.
Option C. pressure chamber.
Correct Answer is. instrument case.
Explanation. Jepessen A & P Technician Textbook p11-9.

Option B. selection of altitude.
Option C. altitude information.
Correct Answer is. approach to or deviation from selected altitude.
Explanation. NIL. http://www.domingoaereo.hpg.ig.com.br/Boeing727/ManuA.L/warnings.htm

Question Number. 355. Aircraft certified before 1997 with RVSM, maximum tolerance for the system is.
Option A. +/-200ft system, +/-50ft for instrument error.
Option B. +/-300ft system, +/-50ft for instrument error.
Option C. +/-500ft system tolerance.
Correct Answer is. +/-300ft system, +/-50ft for instrument error.
Explanation. Download TGL No 6 at http://www2.eur-rvsm.com/library.htm Para.8.3.

Question Number. 356. Machmeters work on.
Option A. pitot.
Option B. pitot and static.
Option C. static.
Correct Answer is. pitot and static.
Explanation. NIL.

Question Number. 357. An aircraft with Mach warning will warn.
Option A. when envelope limit is reached.
Option B. when Mach 1 is exceeded.
Option C. when Mcrit is reached.
Correct Answer is. when Mcrit is reached.
Explanation. NIL.

Question Number. 358. An HSI provides what information?.
Option A. VOR, map, attitude, ILS.
Option B. VOR, ILS, plan, attitude.

Option C. DC bus.
Correct Answer is. AC bus.
Explanation. NIL.

Question Number. 2. 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. 3. Emergency floor lighting system is inoperative, then.
Option A. the aircraft is allowed to fly in daylight conditions only.
Option B. the aircraft is not allowed to fly until repaired.
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. 4. If a section of the emergency floor proximity lights are inoperative.
Option A. the aircraft is allowed to fly back to base where the defect can be fixed.
Option B. the aircraft cannot fly i.e. grounded until the defect is fixed.
Option C. the aircraft can fly but the section with the problem is not used/shut off.
Correct Answer is. the aircraft is allowed to fly back to base where the defect can be fixed.
Explanation. Aircraft Electricity and Electronics. Eismin Page 250.

Question Number. 5. The tail navigation light. What angle of divergence should it have?.
Option A. 120°.
Option B. 180°.
Option C. 140°.

Option B. Turning on and off the NAV lights.
Option C. Flashing the landing light.
Correct Answer is. Turning off the anti-collision lights.
Explanation. ANO Section 2 Section 111 Para 9 (3).

Question Number. 11. What is the power supply to cabin flourescent tubes?.
Option A. 115 VAC.
Option B. 200 VAC.
Option C. High voltage stepped up.
Correct Answer is. 115 VAC.
Explanation. Jeppesen A&P Technician Airframe Textbook. 12-66 p584.

Question Number. 12. What is the arc of a landing light is?.
Option A. 11°.
Option B. 20°.
Option C. 15°.
Correct Answer is. 11°.
Explanation. Pallett Aircraft Electrical Systems 3rd Edition Page 146 Fig 10-1.

Question Number. 13. The visible angle of a white tail navigation light is.
Option A. 110°.
Option B. 140°.
Option C. 11°.
Correct Answer is. 140°.
Explanation. Pallett Aircraft Electrical Systems 3rd Edition Page 146, and JAR 25.1387.

Question Number. 14. Wing navigation lights must be visible through which angle?.
Option A. 180°.
Option B. 110°.
Option C. 125°.

Correct Answer is. 110°.
Explanation. Aircraft Electrical Systems Pallett Page 146, and JAR 25.1387, and E.E.L/1-10 301 a).

Question Number. 15. Cockpit dome lighting is provided by the.
Option A. battery bus and ground services bus.
Option B. ground services bus.
Option C. battery bus.
Correct Answer is. battery bus and ground services bus.
Explanation. Aircraft Electricity and Electronics, Eismin 5th edition page 256.

Question Number. 16. Wing steady light must be visible through.
Option A. 110 degrees.
Option B. 180 degrees.
Option C. 70 degrees.
Correct Answer is. 110 degrees.
Explanation. Aircraft Electrical Systems EHJ Pallett Page 146.

Question Number. 17. Upper and lower strobe lights are coloured.
Option A. red.
Option B. green.
Option C. white.
Correct Answer is. red.
Explanation. Transport Category Aircraft Systems Jeppesen Page 7-2.

Question Number. 18. Cargo bay lights on a modern aircraft are supplied by.
Option A. the battery bus.
Option B. DC handling bus.
Option C. AC handling bus.
Correct Answer is. AC handling bus.
Explanation. BAe 146 A.M.M (AC ground service busbar) although other aircraft (A340, B747) use 28 VDC ground bus.

Question Number. 19. What is the minimum candelas of an anti-collision beacon?.
Option A. 100.
Option B. 50.
Option C. 20.

Option B. 28 V DC.
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. 25. How are passenger reading lights normally tested?.
Option A. By using a READ LIGHT TEST switch on the cabin attendant panel.
Option B. Each one is switched on individually at passenger panel.
Option C. By using a READ LIGHT TEST switch at any passenger panel.
Correct Answer is. Each one is switched on individually at passenger panel.
Explanation. NIL.

Question Number. 26. In what position should the selector switch be for a standby and emergency lighting system during flight?.
Option A. ON.
Option B. Armed.
Option C. OFF.
Correct Answer is. Armed.
Explanation. Transport Category Aircraft Systems 11-23.

Question Number. 27. Dome lights on the flight deck are powered by the.
Option A. ground services.
Option B. battery bus bar.
Option C. battery bus bar or ground services.
Correct Answer is. battery bus bar or ground services.
Explanation. Boeing 757 WDM 33-11-31 pg 1 shows 28vdc BAT Bus for normal use, when the flight deck ovrd relay is energised the 28vac GND service bus powers the dome lights.

Question Number. 28. 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.

Correct Answer is. the on-board data base to be updated.
Explanation. NIL.

Question Number. 19. An aircraft condition monitoring system.
Option A. sends information to the central maintenance cell.
Option B. stores information for long term error analysis.
Option C. detects the source of a fault.
Correct Answer is. stores information for long term error analysis.
Explanation. NIL.

Question Number. 20. A C M S quick access recorder.
Option A. tape must not be used before.
Option B. must use digital tape.
Option C. can use previously if first bulk erased.
Correct Answer is. can use previously if first bulk erased.
Explanation. NIL.