

AON questions

Q-1: The EHSI is showing 5* fly right with a TO indication. the aircraft heading is 280*(m) and the required track is 270* the radial is:

A-1: radial 095

Q-2: The SSR ground tranciever interrogrates on and recieves responses on :

A-2: 1030, 1090

Q-3: the airborne weather radar (AWR) cannot detect:

A-3: snow

Q-4: the contents of the navigation and systems message from NAVSTAR/GPS SVs include:

A-4: satellite clock error, amanac data, ionspheric propagation information.

Q-5: the advantages of SSR mode S are:

A-5: data link reduced voice communications

Q-6: which is the most suitable radar for measuring short ranges?

A-6: continuous wave primary

Q-7: why is a secondary radar display free from weather clutter?

A-7: the principle of the return of echoes is not used.

Q-8: the PRN codes are used to:

A-8: determine the time interval between the satellite transmission and receipt of the signal at the receiver.

Q-9: According to ICAO (annex 11), the definition of an RNAV system is:

A-9: one which enables the aircraft to navigate on any desired flight path within the coverage of appropriate ground based navigation aids or within the specified limits of self-contained on-board systems or a combination of the two

Q-10: The main advantage of a slotted scanner is:

A-10: reduces side lobes and directs more energy into the main beam.

Q-11: NAVSTAR GPS receiver clock error is removed by:

A-11: adjusting the pseudo-ranges to determine the error

Q-12: the NAVSTAR/GPS segments are:

A-12: space, control, user

Q-13: the use of the AWR on the ground is:

A-13: permitted provided special precautions are taken to safeguard personnel and equipment

Q-14: what are the ground components of MLS?

A-14: separate azimuth and elevation antennae with DME

Q-15: the accuracy of SSR mode C altitude as displayed to the air traffic controller is:

A-15: +/-50 ft

Q-16: the position of a GNSS aerial on an aircraft is:

A-16: on the top of the fuselage close to the centre of gravity

Q-17: The emissions from a non-directional beacon (NDB) are:

A-17: omni-directional

Q-18: the frequency of AWR is:

A-18: 9375 MHz

Q-19: the vertical position provided by SSR mode C is referenced to:

A-19: 1013.25 hPa

Q-20: concerning NAVSTAR/GPS orbits, which of the following statements is correct?

A-20: the inclination of the orbits is 55° with an orbital period of 12 hours.

Q-21: the amplitude modulation of the ILS outer marker is and it illuminates the light in the cockpit.

A-21: 400hz blue

Q-22: the definition of a radar display will be the best with:

A-22: narrow beamwidth and narrow pulsedwidth.

Q-23: primary radar operates on the principle of:

A-23: pulse technique.

Q-24: for a conventional VOR a phase difference of 090° would be achieved by flying..... from the beacon:

A-24: east

Q-25: the coverage of the ILS glide slope with respect to the localizer centre line is:

A-25: +/-8° to 10NM

Q-26: picture

Q-27: the principle of operation of the ILS localizer transmitter is that it transmits two overlapping lobes on:

A-27: the same frequency with different amplitude modulations

Q-28: on an ILS approach you receive more of the 90 Hz modulation than the 150 Hz modulation.

You should take is:

A-28: fly right and down

Q-29: at a range of 200 NM from a VOR, if there is an error of 1°, how far off the centerline is the aircraft?

A-29: 3.5 NM

Q-30: the middle marker is usually located at a range of, with an audio frequency of and illuminates the light

A-30: 1 km 1300 Hz amber

Q-31: in which band does the ILS glide path operate?

A-31: decimetric

Q-32: distance on MLS IS measured by:

A-32: co-located DME

Q-33: the best radar for measuring very short range is

A-33: a continuous wave primary radar

Q-34: picture

Q-35: the ILS glide slope transmitter generates false glide paths because of:

A-35: multiple lobes in the radiation pattern

Q-36: the coverage of MLS is either side of the centre line to a distance of

A-36: 40° 20 NM

Q-37: Which of the following systems use pulse technique?

- .1 secondary surveillance radar
2. airborne weather radar
3. distance measuring equipment
4. primary radar

A-37: all of the above

Q-38: picture

Q-39: The frequency band of the ILS glide path is:

A-39: UHF

Q-40: the main advantage of a continuous wave radar over a pulsed radar is:

A-40 : removes the minimum range restriction

Q-41: If the identification of a VOR is FKL and the paired DME identification is FKZ, then:

A-41: the beacons are between 600 m and 6 NM apart

Q-42: The navigation database in an FMC:

A-42: can only be read by the flight crew

Q-43: EGNOS provides a WAAS by determining the errors in..... and broadcasting these errors to receivers using.....

A-43: SV range geostationary satellites

Q-44: If the aircraft DME interrogates a ground transponder on a frequency of 1199 MHz, it will look for replies on:

A-44: 1136 MHz

Q-45: (pic) The DME in an aircraft at FL630 measures a slant range of 16 NM from a ground station at 1225 ft AMSL. The plan range is:

A-45: 12.5 NM

Q-46: The best position on an aircraft for the GNSS aerial is:

A-46: on the fuselage close to the centre of gravity

Q-47: The purpose of the PRN codes in NAVSTAR/GPS is to:

A-47: identify the satellites

Q-48: The provision of RAIM requires a minimum of.... SVs:

A-48: 5

Q-49: The most accurate external reference position will be provided by:

A-49: Twin DME

Q-50: picture

A-50: 360°(1)

Q-51: If the receiver almanac becomes corrupted it will download the almanac from the constellation.

This download will take:

A-51: 12.5 minutes

Q-52: The model of the earth used for GPS is:

A-52: WGS84

Q-53: The RNAV function of the FMC produces a position which:

A-53: combines the long term accuracy of the external reference with the short term accuracy of the IRS

Q-54: If the signal from an SV is lost during an aircraft manoeuvre:

A-54: the receiver position will degrade regardless of the action taken

Q-55: The altitude read-out at the ground station from a mode C response will give the aircraft altitude within:

A-55: 50 ft

Q-56: The number of SVs required to produce a 3D fix is:

A-56: 4

Q-57: The principle error in GNSS is:

A-57: ionospheric propagation

Q-58: A DME recognizes replies to its own interrogating pulses because:

A-58: the PRF of the interrogating pulses is jittered

Q-59: The NAVSTAR/GPS operational constellation comprises:

A-59: 24 satellites in 6 orbits

Q-60: PICTURE

A-60: Diagram C

Q-61: The least accurate bearing information taken by an aircraft over the sea from a NDB will be from:

A-61: an inland beacon at an acute angle

Q-62: When converting VOR and ADF bearings to true, the variation at the should be used for VOR and at thefor ADF:

A-62: station ,aircraft

Q-63: Which wavelength corresponds to a frequency of 5035 MHz?

A-63: 5.96 cm

Q-64: Doppler operates on the principle that between a transmitter and receiver will cause the received frequency to if the transmitter and receiver are moving

A-64: relative motion, decrease, apart

Q-65: The maximum range an ATC facility at 1369 ft AMSL can provide a service to an aircraft at FL350 is:

A-65: 276 NM

Q-66: The Doppler effect is:

A-66: the change in frequency caused by the relative movement between a transmitter and receiver

Q-67: An error applicable to VDF would be:

A-67: synchronous transmission

Q-68: The accuracy of ADF may be affected by:

A-68: angle of bank, mountain effect, station interference

Q-69: The accuracy of ADF by day and excluding compass error is:

A-69: $\pm 5^\circ$

Q-70: The pilot of an aircraft flying at FL240 is 250 NM from a VOR at 16 ft AMSL which he selects. He receives no signal from the VOR. This is because:

A-70: the aircraft is beyond line of sight range

Q-71: Determine which of the following statements concerning atmospheric ionization are correct:

1. The highest levels of ionization will be experienced in low latitudes
2. Ionization levels increase linearly with increasing altitude
3. The lowest levels of ionization occur about midnight
4. The E-layer is higher by night than by day because the ionization levels are lower at night

A-71: statements 1 and 4 are correct

Q-72: The principle of operation of VOR is:

A-72: bearing by phase comparison

Q-73: An NDB has emission designator NONA1A this will require the use of the BFO for:

A-73: tuning, identification and monitoring

Q-74: The principal propagation path employed in an NDB/ADF system is:

A-74: surface wave

Q-75: A class B VDF bearing will have an accuracy of:

A-75: $\pm 5^\circ$

Q-76: The VDF term meaning 'true bearing from the station' is:

A-76: QTE

Q-77: The phase difference measured at the aircraft from a VOR is 235". The bearing of the beacon from the aircraft is:

A-77: 055°

Q-78: The ADF error which will cause the needle to 'hunt' (i.e. oscillate around the correct bearing) is:

A-78: night effect

Q-79: ADF quadrantal error is caused by:

A-79: the aircraft's major electrical axis, the fuselage, reflecting and re-radiating the incoming NDB transmissions.

Q-80:

A-80:

Q-81: flying an ILS approach the equipment senses that the 90Hz modulation predominates on both the localizer and the glide path. The indications the pilot will see are:

A-81: fly right fly down

Q-82: MLS has 200 channels available in the frequency band:

A-82: 5031-5090 MHz

Q-83: the time interval between the transmission of a pulse and receipt of the echo from a target is 925.5 microseconds the range of the target is:

A-83: 75NM

Q-84: an advantage of a slotted antenna (planar array) over a parabolic reflector are:

A-84: less power required

Q-85: the AWR operating frequency is

A-85: 9375 GHz

Q-86: A precision approach runway CAT II is an instrument runway served by ILS and visual aids intended for operation down to

A-86: a RVR of 300-450 meters and a DH of not less than 100ft.

Q-87: on a ILS approach, using 3* glide path, the height of an aircraft, ground speed 160 kt, at 3.5 NM from touchdown should be:

A-87: 1050 ft

Q-88: when flying downwind abeam the upwind end of the runway the indications from the ILS on the CDI will be:

A-88: erratic on both localizer and glide path

Q-89: The coverage of the approach azimuth and elevation of a MLS is:

A-89: 41-40° to 20 NM

Q-90: On a colour AWR display, the heaviest precipitation will be displayed in:

A-90: red

Q-91: The type of radar which has no minimum range restriction is:

A-91: primary CW radar

Q-93: The maximum theoretical range of a radar is determined by:

A-92: PRF

Q-93: A radar transmitting on 600 MHz has a PRF of 300 pps and an aerial rotation rate of 5 pm.

This radar will be:

A-93: an area surveillance radar

Q-94: The AWR frequency is selected because it gives:

A-94: good returns from water droplets

Q-95: The SSR code to select when the aircraft is being unlawfully interfered with is:

A-95: 7500

Q-96: The azimuth coverage of a 3° glide path is:

A-96: +/-8° to 10 NM

Q-97: A full MLS system comprises a DME and:

A-97: 4 elements multiplexing on one frequency.

Q-98: The best resolution will be achieved on a radar display with:

A-98: narrow beamwidth and narrow pulse width

Q-99: An aircraft is 100 NM SW of a VOR heading 080". The pilot intends to home to the VOR on the 210 radial

The setting he should put on the OBS is .. and the CDI indications will be:

A-99: 030, TO, Fly Right

Q-100: In SSR the aircraft replies on MHz and the ground station interrogates on MHz

A-100: 1090 1030

Q-101: For an aircraft flying straight and level at constant IAS, when flaps are deployed the induced drag:

A-101:stays the same

Q-102:Which of the following is the speed that would activate the stick shaker?

Q-102: Above VS

Q-103: Positive static longitudinal stability means:

A-103: nose-down pitching moment when encountering an up gust.

Q-104: a slat on an aerofoil:

A-104: increases the energy of the boundary layer and increases the maximum angle of attack.

Q-105:When flying straight and level in 1g flight, slightly below maximum all up weight, a basic stall warning system (flapper switch) activates at 75 kt IAS and the aircraft stalls at 68 kt IAS. Under the same conditions at maximum all up weight the margin between stall warning and stall will:

A-105: remain the same because increased weight increases the IAS that corresponds to a particular angle of attack.

Q-106:An aircraft has trailing edge flap positions of Q, 15, 30 and 45 degrees plus slats can be deployed. What will have the greatest negative influence on

CL CD?

A-106:30 - 45 flaps.

Q-107: what is the pitch angle

A-107: The angle between the longitudinal axis and the horizontal plane.

Q-108: Extending the flaps while maintaining a constant angle of attack (all other factors constant):

A-108: the aircraft will climb

Q-109: How does a plain flap increase CL?

A-109: Increases camber

Q-110: If flaps are extended in level flight:

A-110: CLMAX increases

Q-111: With a swept wing the nose-up phenomena is caused by:

A-111: tip stall

Q-112: What is the effect of an aft shift of the

CG on (1) static longitudinal stability and (2) the required control deflection for a given pitch change?

A-112: (1) reduces (2) reduces.

Q-113: How is the pitching moment affected if flaps are deployed in straight and level flight?

A-113: Depends on CG position

Q-114: In order to maintain straight and level flight when trailing edge flaps are retracted, the angle of attack must:

A-114: be increased

Q-115: The CG of an aeroplane is in a fixed position forward of the neutral point.

Speed changes cause a departure from the trimmed position. Which of the following statements about the stick force stability is correct?

A-115: An increase of 10 kt from the trimmed position at low speed has more effect on the stick force than an increase in 10 ks from the trimmed position at high speed.

Q-116: Which stall has the greatest angle of attack?

A-116: deep stall

Q-117: If the angle of attack is maintained constant, what happens to the coefficient of lift when flaps are deployed?

A-117: increases

Q-118: vortex generators:

A-118:use free stream flow to increase energy in the turbulent boundary layer

Q-119: stalling speed increases when:

A-119: recovering from a steep dive.

Q-120: What effect on stall speed do the following have?

A-120:Decreasing sweep angle decreases stall speed.

Q-121:Which of the following combination of characteristics would be most likely make an aircraft susceptible to deep stall?

A-121:Swept wing and a T-tail

Q-122:Which of the following aircraft designs would be most prone to super stall?

A-122:Swept-back wing.

Q-123:VS is 100 kt at $n = 1$. What will the stall speed be at $n = 2$?

A-123: 141 kt

Q-124:What causes deep stall in a swept-back wing?

A-124: CP moves forward

Q-125: the IAS of a stall:

A-125:may increase with increasing altitude, especially high altitude, forward CG and icing.

Q-126:What happens to the stall speed with flaps down, when compared to flaps up?

A-126: decrease

Q-127:What does a stick pusher do?

A-127:Activate at a certain angle of attack and push the stick forward.

Q-128:What causes a swept wing'aircraft to pitch-up at the stall?

A-128:Spanwise flow

Q-129:What are the effects of tropical rain on:

(i) CLMAX (ii) Drag

A-129: (i) decrease (ii) increase

Q-130 The effect of tropical rain on drag and stall speed would be to:

A-130: increase drag and increase stall speed.

Q-131: What influence does the CG being on the forward limit have on VS and the stall angle?

A-131: VS increases, stall angle remains constant.

Q-132: what is load factor?

A-132: Lift / Weight

Q-133: What effect on stall speed do the following have?

A-133: Decreasing sweep angle decreases stall speed.

Q-134: stalling speed increases when:

A-134: recovering from a steep dive

Q-135: unavailable

A-135: unavailable

Q-136: what is a high speed stall?

A-136: A stall due to decreasing

CLMAX at speeds above

M 0.4

Q-137: Which of the following is the most important result/problem caused by ice formation?

A-137: Reduction in CLMAX

Q-138: The CP on a swept wing aircraft will move forward due to:

A-138: tip stall of the wing

Q-139: The angle of attack at the stall:

A-139: is not affected by changes in weight.

Q-140: Which of the following is the correct designation of stall speed in the landing

configuration?

A-140: VSO

Q-141:A symmetrical aerofoil section at CL =

0 will produce?

A-141: Zero pitching moment.

Q-142:Which of the following is the cause of wing tip vortices?

A- 142: Air spilling from the bottom surface to the top surface at the wing tip

Q-143: When considering an angle of attack versus coefficient of lift graph for a cambered aerofoil. where does the lift curve intersect the vertical CL axis?

A-143: above the origin

Q-144: Which of the following most accurately describes the airflow which causes wing tip vortices?

A-144: From the tip to the root on the top surface and from the root to the tip on the bottom surface over the wing tip

Q-145:At a constant IAS, induced drag is affected by:

A-145: aircraft weight

Q-146: An aircraft is flying straight and level, if density halves, aerodynamic drag will:

A-146: decrease by a factor of two

Q-147: If IAS is doubled, by which of the following factors should the original CL be multiplied to maintain level flight?

A-147: 0.25

Q-148:Considering the lift to drag ratio, in straight and level flight which of the following is correct?

A-148: L/D is maximum at the speed for minimum total drag.

Q-149: The formula for lift is:

A-149: $L = \frac{1}{2} \rho V^2 S$

CL

Q-150: Where does the lift act on the wing?

A-150: Centre of Pressure

Q-151: On the approach to land, ground effect will begin to be felt at:

A-151: half the wingspan above the ground

Q-152: Which of the following is the correct definition of aspect ratio?

A-152: Span divided by mean chord

Q-153: Angle of attack is the angle between:

A-153: undisturbed airflow and chord line.

Q-154: what is interference drag?

A-154: Drag due to the interaction of individual boundary layers at the junction of aircraft major components

Q-155: Which of the following is the cause of wing tip vortices?

A-155: Spanwise flow vector from the tip to the root on the bottom surface of the wing

Q-156: When considering an angle of attack versus coefficient of lift graph for a cambered aerofoil, where does the lift curve intersect the vertical CL axis?

A-156: below the origin

Q-157: high aspect ratio

A-157: reduces induced drag

Q-158: CD_i is proportional to which of the following?

A-158: CL squared

Q-159: When considering the coefficient of lift and angle of attack of aerofoil sections:

A-159: a symmetrical section at zero angle of attack will produce zero coefficient of lift.

Q-160: on entering ground effect:

A-160: less thrust is required

Q-161: In accordance with Bernoulli's Theorem, where PT = Total Pressure, PS = Static pressure and q = Dynamic pressure:

A-161: $PT - PS = q$

Q-162: Which of the following expressions is correct?

A-162: $M = F \times A$

Q-163: Bernoulli's Theorem states:

A-163: dynamic pressure increases and static pressure decreases

Q-164: In a subsonic flow venturi, the relationship between the total pressure, static pressure and dynamic

pressure of undisturbed air and air in the throat will be:

(i) Dynamic pressure will be constant, static pressure will decrease. (ii) Total pressure will be constant, dynamic pressure will increase.

A-164: (i) is incorrect and (ii) is correct

Q-165: The Principle of Continuity states that in a tube of increasing cross-sectional area, the speed of a subsonic and incompressible airflow will:

A-165: decrease

Q-166: The Principle of Continuity states that in a streamtube of decreasing cross-sectional area, the speed of a subsonic and incompressible airflow will:

A-166: increase

Q-167: Static pressure acts:

A-167: in all directions

Q-168: At a constant CAS when flying below sea level an aircraft will have:

A-168: a lower TAS than at sea level at ISA conditions

Q-169: As a smooth flow of subsonic air at a--velocity less than M 0.4 flows through a divergent duct: (i) static pressure (ii)

velocity

A-169: (i) increases and (ii)

decreases

Q-170: When considering the Principle of Continuity for incompressible subsonic flow, what happens in a streamtube with a change in cross-sectional area?

A-170: The density at the throat will be the same as the density at the mouth.

Q-171: What are the units for wing loading and dynamic pressure?

A-171: N/square metre and N/square metre

Q-172: Which of the following creates lift?

A-172: An accelerated air mass

Q-173: When considering the Principle of Continuity for subsonic flow, what happens in a streamtube for a change in cross-sectional area?

A-173: RHO 1 = RHO 2

Q-174: The difference between IAS and TAS will:

A-174: remain constant at all times

Q-175: Consider a uniform flow of air at velocity V in a streamtube. If the temperature of the air in the tube is raised:

A-175: the mass flow remains constant and the velocity V will increase

Q-176: Which of the following statements about a venturi in a subsonic airflow is correct?

(i) The dynamic pressure in the undisturbed flow and in the throat are equal.

(ii) The total pressure in the undisturbed flow and in the throat are equal.

A-176: (i) is incorrect and (ii) is correct

Q-177: As subsonic air flows through a convergent duct: (i) static pressure (ii) velocity

A-177: (i) decreases and (ii) increases

Q-178: TAS is

A-178: lower than IAS at ISA altitudes below sea level

Q-179: A line from the centre of curvature of the leading edge to the trailing edge, equidistant from the top and bottom wing surface is the:

A-179: camber line

Q-180 : Which of the following is the equation for power?

A-180: Nm/s

Q-181: With a downward sloping runway:

A-181: V1 will decrease

Q-182: For a turboprop aircraft, the LDA at an aerodrome is 2200 m. If the conditions are indicated as wet, what would the equivalent dry LDA be?

A-182: 1339 m

Q-183: The information in a light aircraft manual gives two power settings for cruise, 65% and 75%. If you fly at 75% instead

A-183: cruise speed will be higher, fuel consumption will be higher

Q-184: The reduced thrust take-off procedure may not be used when:

A-184: anti-skid unserviceable

Q-185: Climbing in the troposphere at a constant TAS:

A-185: Mach number increases

Q-186: Which of the following combinations most reduces the take-off and climb performance of an aircraft?

A-186: High temperature and low pressure

Q-187: During aircraft certification, the value of VMCG is found with nose wheel steering inoperative. This is because

A-187: VMCG must be valid in both wet and dry conditions.

Q-188: When gliding into a headwind airspeed should be:

A-188: higher than the max. range glide speed in still air

Q-189: What factor must be applied to the landing distance available at the destination aerodrome to determine the landing performance of a turbojet aircraft on a dry runway?

A-189: 0.60

Q-190: How does the slush thickness affect the V1 reduction required?

A-190: Smaller reduction if thicker

Q-191: Which is true regarding a balanced field?

A-191: Provides minimum field length required in the case of an engine failure

Q-192: if the maximum take-off mass is limited by tyre speed, what effect would a down sloping runway have?

A-192: No effect

Q-193: How is fuel consumption affected by the C of G position, in terms of air nautical miles per kg?

A-193: Increases with a forward C of G

Q-194: Which denotes the stall speed in the landing configuration?

A-194: VsO

Q-195: When in a gliding maneuver, in order to achieve maximum endurance the aircraft should be flown at:

A-195: the speed for min. power

Q-196: Putting in 16.500 litres of fuel with an SG of 780 kg/m², and writing 16.500 kg of fuel on the load sheet will result in:

A-196: TOD and ASD decreasing, and the calculated V2 being too fast

Q-197: what does density altitude signify

A-197: An accurate indication of aircraft and engine performance.

Q-198: If V1 is found to be lower than VMCG, which of the following statements will be true?

A-198: Take-off is not permitted

Q-199: In a balanced turn load factor is dependent on.

A-199: bank angle only

Q- 200: At MSL, in ISA conditions

• Climb gradient = 6%

What would the climb gradient be if:

• Pressure altitude 1000 ft

• Temperature 17°C

• Engine anti-ice on

• Wing anti-ice on

• - 0.2% engine anti-ice, - 0,1% wing anti-ice, 0.2% per 1000 ft pressure altitude, 0.1 % per 1°C ISA deviation

A-200: 5.1%

Q-201: What cloud types are classified as medium cloud?

A-201: Ac + As

Q-202: Clear air turbulence, in association with a polar front jet stream in the Northern Hemisphere, is more severe:

A-202: looking downstream on the left hand side

Q-203: (pic) The wind at square A3 is likely to be:

A-203: 50 kt

Q-204: Flying conditions in Ci cloud and horizontal visibility:

A-204: greater than 1000 m vis, no icing

Q-205: The significance of lenticular cloud is:

A-205: there are mountain waves present but they may not give severe turbulence

Q-206: What cloud does hail fall from?

A-206: Cb

Q-207: A north/south mountain range, height 10.000 ft is producing marked mountain waves. The greatest potential danger exists for an aircraft flying:

A-207: above a line of clouds parallel to the ridge on the lee side at FL25

Q-208: Which of the following statements referring to jet streams is correct?

A-208: Turbulence associated with jet streams is probably associated with the rapid windshear in the vicinity of the jet

Q-209: What type of cloud is associated with drizzle?

A-209: St

Q-210: When flying in IMC in a region close to a range of hills 2000 ft high, in stable air and with wind direction at right angles to the axis of the range of hills, which of the following is probably the most dangerous practice:

A-210: flying parallel to the hills on the downwind side at flight level 40

Q-211: What is the composition of Ci cloud?

A-211: Ice crystals

Q-212: A mountain range is aligned in an east/west direction. Select the conditions from the table below that will give rise to mountain waves at 2000ft 5000 ft 10 000 ft:

A-212: 170/20 190/40 210/60

Q-213: Mountain waves can occur:

A-213: in the stratosphere and troposphere

Q-214: For mountain waves to form, the wind direction must be near perpendicular to a ridge or range of mountains and the speed must:

A-214: increase with height within a stable layer above the hill

Q-215: (pic) Flight conditions at B1 are likely to be:

A-215: turbulent due to marked up and down currents

Q-216: Maximum turbulence associated with the mountain waves is likely to be:

A-216: approximately one wavelength downwind of, and approximately level with, the top of the ridge

Q-217: For the formation of mountain waves, the wind above the level of the ridge should:

A-217: increase with little change in direction

Q-218:(pic) The most extreme turbulence can occur:

A-218: at B1

Q-219: Clear air turbulence (CAT) should be reported whenever it is experienced.

What should be reported if crew and passengers feel a definite strain against their seat or shoulder straps, food service and walking is difficult and loose objects become dislodged?

A-219: Moderate TURB

Q-220: (pic)The wind at ABC 4 may be:

A-220: a jet stream

Q-221: During the stage of a thunderstorm cell, the cloud contains Complete the above statement correctly using one of the following:

A-221: mature/up currents and down currents

Q-222: What are lenticularis clouds a possible indication of?

A-222: Mountain waves

Q-223: Which of the following will indicate medium level instability, possibly leading to thunderstorms?

A-223: Altocumulus Castellanus

Q-224: Ceilometers measure:

A-224: cloud height

Q-225: Altostratus is:

A-225: a medium level cloud

Q-226: The following is unlikely to be a hazard below a thunderstorm:

A-226: severe icing

Q-227: A plain in Western Europe at 500 m (1600 ft) AMSL is covered with a uniform altocumulus cloud during summer months. At what height AGL is the base of the cloud expected?

A-227: 7000 - 15000 ft

Q-228: Thunderstorms require a trigger action to release the conditional instability.

Which of the following would be the least suitable as a trigger?

A-228: Subsidence in tropical latitudes

Q-229: CB cloud in summer contains:

A-229: water droplets, ice crystals and super cooled water droplets

Q-230: What will snow most likely fall from?

A-230: Ns

Q-231: When moist air moves across France in the TS activity is common in southern UK

in the

Complete the above statement correctly using one of the following:

A-231: summer/late afternoon or evening

Q-232: What would be reflected to radar?

A-232: Hail

Q-233: Hazards of the mature stage of a TS cell include lightning, turbulence and:

A-233: icing, microburst and windshear

Q-234: What type of cloud extends into another level?

A-234: NS

Q-235: Which cloud would you encounter the most intensive rain?

A-235: Ns

Q-236: On a significant weather chart the thunderstorm symbol signifies:

A-236: moderate/severe turbulence and/or moderate/severe icing

Q-237: In what cloud is icing and turbulence most severe?

A-237: Cb

Q-238: The conditions which must exist to allow thunderstorms to develop are:

A-238: a steep lapse rate, a stable atmosphere through a large vertical extent and a plentiful supply of moisture

Q-239: Fair weather cumulus gives an indication of:

A-239:

Q-240: Clouds classified as low level are considered to have a base height of:

A-240: the surface - 6500 ft

Q-241: At a station equipped with IRVR, reports are given:

A-241: when the normal visibility is 1500 m or less

Q-242: Thunderstorms caused by..... are most common in the summer and by.....
in the.....

A-242: convection / frontal
activity / winter

Q-243: Hail grows by:

A-243: collision with supercooled water drops

Q-244: How long approximately does a cumulonimbus cell take to complete the full cycle from the cumulus (building) to dissipating stage?

A-244: 2-3 hours

Q-245: Regarding thunderstorms, the most accurate statement amongst the following is:

A-245: the average movement is in accord with the wind at
10.000 ft

Q-246: A microburst usually lasts for.... and is about across.

A-246: 5 minutes 5 km

Q-247: At temperatures of between 0°C and
-10°C clouds will consist of:

A-247: mostly supercooled water droplets and a few ice crystals

Q-248: When approaching at flight level 300 a cumulonimbus cloud with an anvil top, pilots should aim to avoid the cloud by.....NM horizontally.

A-248: 20

Q-249: Thunderstorms are likely if:

A-249: air is unstable, there is sufficient water vapour and there is trigger action

Q-250: Several types of pressure distribution may be associated with radiation fog but all have one feature in common which is:

A-250: a stack pressure gradient

Q-251: Changes of RVR are reported for increments of:

A-251: 25 m up to 400 m

Q-252: Turbulent clouds are most serious from the icing standpoint because:

A-252: strong vertical currents mean that a predominance of large supercooled water droplets will be present

Q-253: Fog may be defined as:

A-253: a reduction of visibility to less than 1000 metres due to the presence of water droplets in suspension in the atmosphere

Q-254: forms when moist air

over a surface which is than the dew point of the air. Fill in the missing words from the list given below:

A-254: Advection fog, passes, cooler

Q-255: Hoar frost forms on an aircraft when:

A-255: the aircraft in subzero clear air suddenly enters a warmer moist region

Q-256: Frontal fog is most likely to:

A-256: form ahead of a warm front

Q-257: When flying through an active CB cloud, lightning strikes are most likely:

A-257: in the temperature band between +10°C and -10°C

Q-258: In circumstances where there is a clear sky, calm wind and a high relative humidity in

autumn:

A-258: radiation fog is likely at sunrise after previous mist

Q-259: Advection fog:

A-259: can sometimes last for 24 hours or more in winter

Q-260: Radiation fog is most likely:

A-260: in an anticyclone in winter

Q-261: If air in transit is heated from below it tends to become more:

A-261: unstable

Q-262: Flying in large CU at a temperature of -20°C, the amount of each cloud droplet that will freeze on impact with the aircraft will be:

A-262: ¼ of the droplet

Q-263: In the N. Hemisphere when flying in the troposphere above the surface friction layer in the polar maritime air mass behind the cold front of a fully developed frontal depression:

A-263: the wind will tend to back in direction and increase in speed with progressive increase of altitude

Q-264: When air from an air mass moves to a lower latitude, it can be expected that:

A-264: surface layer air will become warmer, the relative humidity will fall and the air will become unstable.

Q-265: An air mass that has travelled over an ocean is known as:

A-265: maritime air and has a high humidity

Q-266: In AS cloud at FL170 and a temperature of -20°C the airframe icing most likely to be experienced is:

A-266: light rime icing

Q-267: Flying 50 NM ahead of a warm front out of cloud at 1000 ft in winter, with an ambient temperature of -8°C, there is a strong risk of:

A-267: clear ice in the form of rain ice

Q-268: Stratus cloud of limited depth at a temperature of -5°C will most likely give:

A-268: light to moderate rime ice

Q-269: Most cases of serious piston engine icing occur in cloud, fog, or precipitation with a temperature range between:

A-269: - 10°C to + 25°C

Q-270: The weather associated with polar maritime air is:

A-270: broken cloud, light, moderate or heavy rain

Q-271: The average upper winds at A1, B1 and C1 in Appendix A are respectively:

A-271: northwesterly, westerly, southwesterly.

Q-272: Relative humidity is:

A-272: the actual amount of water vapour in a sample of air over the maximum amount of water vapour that the sample can contain x 100.

Q-273: Characteristic weather associated with a mPc (maritime Polar cold) air mass transiting the British Isles in summer would include:

A-273: widespread Cu and Cb activity overland during the day

Q-274: Polar maritime air is.....And can bringwinter but..... in summer

Complete the above sentence correctly using one of the following:

A-274: unstable/heavy showers/light rain showers

Q-275: Clear ice forms as a result of:

A-275: large supercooled water droplets spreading as they freeze

Q-276: Which of the following conditions is most favourable for the formation of carburettor icing if the aircraft is descending with glide power set? Relative Humidity Ambient Temperature

A-276: 40% +20°C

Q-278: Tropical continental air normally brings to the UK:

A-278: hot dry cloudless weather with a thick haze

Q-279: Referring to the area of the North Atlantic, the mean position of the polar front in January is:

A-279: from Florida to southwest

England

Q-280: Carburettor icing is unlikely:

A-280: at temperatures between - 10°C and
-30°C

Q-281: graph

A-281: cirrus

Q-282: It can be expected that the depth of the friction layer over the UK will be:

A-282: greater in Polar Maritime air due to the instability and moderate wind

Q-283: A secondary depression would form in association with:

A-283: a polar front low

Q-284: The air masses involved in the development of a polar front depression are:

A-284: Polar Maritime and Tropical Maritime

Q-285: Which of the conditions below would lead to the worst icing condition: Size of Drop - Ambient Temp.

A-285: 5mm -4°C

Q-286: With a cold occlusion:

A-286: there is a risk of CB embedded in NS

Q-287: When a cold front passes a station in the British Isles:

A-287: The wind veers and the dew point falls

Q-288: Tropical revolving storms:

A-288: usually have the most severe weather in the quadrant to the right of the track in a hurricane

Q-289: which of the following statements accurately describes the West African tornado!?

A-289: It is a line of thunderstorms producing a line squall aligned roughly north/south

Q-290: After passage of an occluded front in the Northern Hemisphere: Wind Temperature Precipitation

A-290: veers drops or rises begins to dry up

Q-291: In grid square M6 the worst cloud conditions for flying could be:

Graph

A-291: cumulonimbus embedded in nimbostratus

Q-292: Which of the following are thermal depressions?

A-292: The lows forming over flat land in summer, polar air depressions, tropical revolving storms, some of the lows which form inland seas in winter

Q-293: Extensive cloud and precipitation is often associated with a non-frontal thermal depression because of:

A-293: surface convergence and upper level divergence causing widespread ascent of air in the depression

Q-294: Precipitation will reach the ground mainly in the area:

Graph

A-294: J14 - 014

Q-295: A thermal depression is likely to form:

A-295: over the Iberian peninsula during the summer

Q-296: Tropical revolving storms usually:

A-296: do not form within 5° of the Equator

Q-297: With reference to tropical revolving storms, which of the following statements is correct?

A-297: Hurricanes affect the southeast of the USA in late summer

Q-298: In comparison with a primary depression a secondary depression is:

A-298: sometimes more active

Q-299: When flying from west to east through a cold occlusion (below the warm air) over the North Atlantic you would expect the wind to the temperature to

A-299: back/increase

Q-300: A warm occlusion occurs when:

A-300: cool air is forcing warm air over cold air

Q-301: Concerning landing gear, which factors limit take-off performance?

A-301: Tyre speed and VMBE

Q-302: What happens to the field limited take-off mass with runway slope?

A-302: It increases with a downhill slope

Q-303: During certification test flights for a turbojet aeroplane, the measured take-off runs from brake release to a point equidistant between the point at which VLOF is reached and the point at which the aeroplane is 35 ft above the take-off surface are: 1530 m with all engines operating. 1810 m with the critical engine failure recognized at V1, other factors remaining unchanged. What is the correct value of the take-off run?

A-303: 1810 m

Q-304: Vlo is defined as:

A-304: the maximum speed for landing gear operation

Q-305: When climbing at a constant Mach number through the troposphere, TAS:

A-305: decreases.

Q-306: When flying at the optimum range altitude, over time the:

A-306: fuel consumption gradually decreases

Q-307: Up to which height in NADP 1 noise abatement procedure must V2+ 10-20 kt be maintained?

A-307: 3000 ft

Q-308: Cruising with 1 or 2 engines inoperative at high altitude, compared to all engines operative cruise, range will:

A-308: decrease

Q-309: In a glide (power-of descent) if pitch angle is increased, glide distance will:

A-309: decrease

Q-310: With which conditions would the aircraft need to be flown, in order to achieve maximum speed?

A-310: Maximum thrust and minimum drag

Q-311: For a given aircraft mass, flying with a cost index greater than zero set will result in:

A-311: a cruise at a faster Mach number than the Mach number giving best air nautical miles per

kg ratio for a given altitude.

Q-312: When flying in a headwind, the speed for max range should be:

A-312: slightly increased

Q-313: Two identical aircraft at different masses are descending at idle thrust. Which of the following statements correctly describes their characteristics?

A-313: At a given angle of attack, both the vertical and the forward speeds are greater for the heavier aeroplane.

Q-314: Why are step climbs used on long range flights in jet transport aircraft?

A-314: • To fly as close as possible to the optimum altitude as mass reduces

Q-315: What procedure is likely to require V1 to be reduced?

A-315: Take off with anti-skid inoperative

Q-316: A turboprop aircraft with a maximum all up mass in excess of 57.00 kg is limited to:

A-316: 15° angle of bank up to 400 ft

Q-317: The induced drag in an aeroplane:

A-317: decreases as speed increases

Q-318: A tailwind on take-off will not affect

A-318: climb limit mass.

Q-319: With regards to the optimum altitude during the cruise, the aircraft is:

A-319: flown as close to the optimum altitude as ATC will allow

Q-320: If a jet engine fails during take-off, before V1:

A-320: the take-off should be aborted

Q-321: The dry net take-off run required (TORR) for a jet aircraft, with one engine inoperative is:

A-321: brake release point to midpoint between VLOF and 35 ft

Q-322: At maximum range speed in a turbojet the angle of attack is:

A-322: less than L/D max

Q-323: 4 light twin-engine aircraft is climbing from the screen height of 50 ft, and has an

obstacle 10000 m along the net flight path. If the net climb gradient is 10%, there is no wind and obstacle is 900 m above the aerodrome elevation then what will the clearance be?

A-323: 115m

Q-324: An aircraft may use either 5° or 15° flap setting for take-off. The effect of selecting the 5° setting as compared to the 15° setting is:

A-324: take-off distance and take-off climb gradient will both increase

Q-325 A jet aircraft's maximum altitude is usually limited by:

A-325: the altitude at which low and high-speed buffet will occur

Q-326: why is there a requirement for an approach climb gradient?

A-326: Adequate performance for a go-around in the event of an engine failure

Q-327: The drift down is a procedure applied:

A-327: when the engine fails above the operating altitude for one-engine inoperative

Q-328: If not VMBE or VMCG limited, what would V1 be limited by?

A-328: Vr

Q-329: A balanced field length is when:

A-329: ASDA equals TODA

Q-330: Requirements for the third segment of climb are:

A-330: level acceleration with an equivalent gradient of 1.2%

Q-331: If the calculations for an aeroplane of 3250 lbs indicate a service ceiling of 4000 m, what will the service ceiling be when the actual take-off mass is 3000 lbs?

A-331: higher

Q-332: What factors would cause V2 to be limited by VMCA?

A-332: • Combination of the above

Q-333: How does the power required graph move with an increase in altitude?

A-333: Up and to the right

Q-334: With respect to en-route diversions (using drift down graph), if you believe that you will not clear an obstacle do you:

A-334: asses remaining fuel requirements, then jettison fuel as soon as possible

Q-335: The landing speed, Vref, for a single-engine aircraf must be not less than:

A-335: 1.3Vs0

Q-336: Take off on a runway with standing water, with a depth of 0.5 cm. Compared to a dry runway, field length limited mass will:

A-336: decrease, with a decreased V1

Q-337:Climbing to cruise altitude with a headwind will:

A-337: decrease ground distance covered to climb

Q-338: with respect to field length limit, fill in the blanks in the follow statement.

The distance to accelerate to , at which point an engine fails, followed by the reaction time of mn and the ensuing deceleration to a full stop must be completed within the

A-338: V1, 2 sec, ASDA

Q-339 : Pitch angle during decent at a constant Mach number will:

A-339: decrease

Q-340: If there is an increase in atmospheric pressure and all other factors remain constant, it should result in:

A-340: decreased take-off distance and increased climb performance.

Q-341: For a turbojet aeroplane the third segment of climb begins when:

A-341: acceleration to flap retraction speed begins (min 400 ft)

Q-342: The coefficient of lift may be increased by lowering the flaps or:

A-342: increasing angle of attack

Q-343: During the certification of an aeroplane, the take-off distance with all engines operating and the take-off distance with one engine inoperative are:

- 1547 m
- 1720 m

What is the distance used in the aircraft certification?

A-343: 1779 m

Q-345: Two identical turbojets are holding at the same altitude and have the same specifc fuel

consumption.

Aeroplane 1 weighs 130.000 kg and fuel flow is 4300 kg/hr. If aeroplane 2 weighs 115.000 kg what is the fuel flow of aeroplane 2?

A-345: 3804 kg/hr

Q-344: Landing on a runway with 5 mm wet snow will:

A-344: increase landing distance

Q-346: If the flap setting is changed from 10 degrees to 20 degrees, V2 will:

A-346: decrease if not limited to VMCA.

Q-347: in aircraft is certified to land with flaps at either 25 or 35 degrees of flap. If the pilot selects the higher setting there will be:

A-347: reduced landing distance and reduced go-around performance

Q-348: The buffet onset boundary chart tells the pilot the:

A-348: Mach number for low speed buffet and shock buffet for various masses and altitudes.

Q-349: Vref for a Class B aircraft is defined by:

A-349: 1.3Vs

Q-350: Which conditions are most suited to a selection of lower flap for take-off?

A-350: Low airfield elevation, close obstacles, long runway, high temperature

Q-351: What landing distance requirements need to be met at an alternate airfield compared to a destination airfield for a turboprop?

A-351: Same as destination

Q-352: For a turbojet aeroplane the second segment of the climb begins when:

A-352: the landing gear is fully retracted

Q-353: in wet conditions, what extra percentage over the dry gross landing distance must be available for a turbojet?

A-353: 92%

Q-354: Reference point zero refers to the:

A-354: point where the aircraft reaches 35 ft

Q-355: Absolute ceiling is defined by:

A-355: altitude where theoretical rate of climb is zero

Q-356: V2min is determined by: (excluding VMCA)

A-356: 1.08VSR for 4 engine turboprops with 1.13VSR for 2 and 3 engine turboprops.

Q-357: Vr for a jet aircraft must be faster than, the greater of:

A-357: 1.05VMCA and V1

Q-358: To maintain the same angle of attack and altitude at a higher gross weight an aeroplane needs:

A-358: more airspeed and more power

Q-359: In dry conditions, when landing at an alternate airport in a turbojet by what factor should the landing distance available be divided to give landing distance?

A-359: 1.67

Q-360: The speed for minimum power required in a turbojet will be:

A-360: slower than the speed for minimum drag.

Q-361: When approaching a wet runway, with the risk of hydroplaning, what technique should the pilot adopt with an inoperative

A-361: Positive touchdown, full reverse and only brakes below Vp

Q-362: Give the correct sequence:

A-362: Vs, Vx, Vy

Q-363: SFC (Specific Fuel Consumption) will:

A-363: not be affected by C of G position

Q-364: An aircraft with a mass of 110.000 kg is capable of maintaining a gradient of 2.6%. With all the atmospheric variables remaining the same with what mass would it be able to achieve a gradient of 2.4%?

A-364: 119167 kg

Q-365: With which conditions would one expect Vmc to be the lowest?

A-365: Hot temp, high pressure altitude, high humidity

Q-366: With a constant weight and Mach No., a higher altitude will require:

A-366: higher AoA

Q-367: When comparing Vx to Vy:

A-367: Vy will always be greater than or equal to Vx.

Q-368: When does THRUST = DRAG?

A-368: Flying level at a constant IAS

Q-369: When operating with anti-skid inoperative:

A-369: both landing and performance will be affected

Q-370: The effects of a contaminated runway on take-off are:

A-370: decreased weight, decreased V1, decreased Vr

Q-371: Flying at an altitude close to coffin corner gives:

A-371: less maneuverability

Q-372: A higher mass at a given altitude will reduce the gradient of climb and the rate of climb.

But the speeds:

A-372: Vx and Vy will increase

Q-373: What happens to the speed for Vx and Vy with increasing altitude?

A-373: Vx remains constant and Vy decreases

Q-374: If the center of gravity moves aft from the most forward position:

A-374: the range will increase and the fuel consumption will decrease

Q-375: In climb limited mass calculations, the climb gradient is a ratio of:

A-375: height gained over distance travelled through the air

Q-376: The effect of a headwind component on glide range is:

A-376: the range will decrease

Q-377: What effect does a downhill slope have on the take-off speeds?

A-377: It decreases V1

Q-378: Give the correct order for the following:

A-378: Vmcg, V1, Vr, V2

Q-379: When take-off mass is limited by Vmbe (maximum brake-energy speed), an increase in the uphill slope will

A-379: allow an increase in the mass

Q-380: The main reason for using the step climb technique is to:

A-380: increase range

Q-381: A copy of what info is to be left on the ground?

A-381: NOTAMs, tech log, operational flight plan, mass & balance, special load notification

Q-382: A category II precision approach (CAT II) is an approach with:

A-382: a decision height of at least 100 ft

Q-383: What is the minimum visibility for a Cat C aircraft during a circling approach?

A-383: 2400 m

Q-384: Which of the following are not required to be carried on each flight?

A-384: European Health Insurance Card (EHIC) for all crew

Q-385: Where would a pilot find the MEL for his aeroplane?

A-385: Ops Manual part B

Q-386: What is the requirement for the issue of an AOC?

A-386: Not already hold an AOC issued by another authority

Q-387: Coverage of permanently illuminated white lights at the rear of the aircraft is:

A-387: 140°

Q-388: Each flight is subject to a preliminary file collecting a certain amount of information. The operator will see that this file is particularly contains:

1. the weather conditions for the day including the weather forecast at destination
2. one copy of the operational flight plan and, if required, the weight and balance sheet
3. copies of the relevant aircraft's technical log
4. the en route NOTAM documentation when specifically issued by the operator
5. special loads notification
6. charts

The combination regrouping all the correct statements is:

A-388: 2,3, 4 & 5

Q-389: What is the minimum RVR for a CAT IIIC approach?

A-389: No minimum

Q-390: A category A aircraft can carry out an indirect (circling) approach followed by a visual manoeuvre only if the horizontal visibility is higher than or equal to:

A-390: 1500 m

Q-391: What are the circling minimum visibility and MDH for a category B aeroplane?

A-391: 1600 m 500 ft

Q-392: What is the system minimum for an NDB approach?

A-392: 350 ft

Q-393: After an incident, the FDR recordings must be kept for:

A-393: 60 days

Q-394: What are the rules on the carriage of PRMs (person with reduced mobility)?

A-394: Cannot impede the performance of crew duty

Q-395: What is the minimum required RVR for CAT IIIB operations?

A-395: 50 m

Q-396: Which of the following is to be left on the ground?

A-396: Operational flight plan

Q-397: When can special VFR be commenced?

A-397: Greater than 3 km visibility

Q-398: According to OPS 1.430, Airfield Operating Minima, what is the lowest MDH using ILS no glide path (LLZ only), VOR, NDB, SRA?

A-398: NDB - MDH 350 ft

Q-399: The "NO SMOKING" sign must be illuminated:

A-399: when oxygen is being supplied in the cabin

Q-400: The considerations for a non-precision approach are:

1. MDA (H)
2. DH
3. ceiling
4. horizontal visibility

A-400: 1,3 & 4

Q-401: A category I precision approach (CAT I) is an approach which may be carried out with a runway visual range of at least:

A-401: 550 m

Q-402: What are the threshold speeds for a Cat D aeroplane?

A-402: 141 - 165 kt

Q-403: For VFR flight (in a cat C aircraft) what is the minimum horizontal visibility below 10000 ft?

A-403: 5 km

Q-404: According to OPS 1.430 (Aerodrome Operating Minima) a Category IIIA approach has a Decision Height of less than 100 ft and a minim (Runway Visual Range) of:

A-404: 200m

Q-405: What is Vat?

A-405: $V_{so} \times 1.3$

Q-406: Who could be nominated as Senior Cabin Crew?

A-406: Cabin crew with more than one year experience

Q-407: What is DH used for?

A-407: Precision approaches

Q-408: What are the rules regarding OPCs?

A-408: Can be completed in the simulator but only if the simulator is certified by the Authority

Q-409: When establishing an instrument approach procedure, 5 aircraft categories according to their speed at the threshold (Vat) are established. The speed is equal to the stalling speed in the landing configuration multiplied by a factor of:

A-409: 1.3

Q-410: When is MDH referenced to the threshold as opposed to the aerodrome elevation?

A-410: The threshold is more than 2 m below the ARP

Q-411: An aeroplane is starting a non-precision approach with an MDH of 250 ft and minimum visibility of 800 m. ATC gives threshold, mid-runway final third RVRs. When may the approach be started?

A-411: When threshold RVR is greater than 800 m

Q-412: What is the Cat IIIB RVR minimum?

A-412: 50 m

Q-413: What is the take-off RVR limit for a Cat A aeroplane, when high intensity centre line lights and edge lights are on and the crew is IFR qualified and approved?

A-413: 200 m

Q-414: What is the minimum crew rest period before flight?

A-414: 12 hours when operating from home base.

Q-415: Aircraft are categorized according to their threshold speeds, multiplied by a factor. What aircraft category corresponds to a range of speeds 141 kt- 165 kt?

A-415: Aeroplane category D

Q-416: The information to be considered for a non-precision approach is:

1. horizontal visibility
2. ceiling
3. minimum descent altitude
4. decision altitude

A-416: 1, 2 & 3

Q-417: What are the limits on crew duty?

A-417: 900 block hours in a year, 100 block hours in any consecutive 28 days.

Q-418: The Cat I minimum decision height is:

A-418: 200ft

Q-419: OPS 1.465 (VFR operating minima), establishes that, the operator shall ensure about VFR flights, that:

A-419: Special VFR flights are not commenced when visibility is less than 3 km

Q-420: What is the minimum horizontal visibility for a Cat D aircraft on a circling approach?

A-420: 3600 m

Q-421: What manuals are to be carried?

A-421: Relevant parts of the ops manual and AFM

Q-422: In determining Aerodrome Operating Minima, what of the following needs to be considered?

1. Crew composition
2. Ability to communicate/receive meteorological information
3. Significant obstacles in the missed approach area
4. Dimensions and characteristics of the runway
5. Navigation equipment in the aeroplane

A-422: all of the above

Q-423: Who accepts the MEL?

A-423: The country of the operator

Q-424: A pilot in command

must comply with ATC instructions immediately

2. is only responsible when airborne
3. may deviate in an emergency
4. may deviate from complying with rules of the air in order to comply with an ATC instruction
5. may request a new clearance if unsatisfied

A-424: 3 & 5

Q-425: A Flight Data Recorder is required in aeroplanes over:

A-425: 5700 kg

Q-426: The MMEL is

A-426: compiled by the manufacturer and approved by the state of design or state of the manufacturer

Q-427: After an accident, the operator of an aeroplane equipped with a flight recorder must keep the original recordings for a minimum period of:

A-427: 60 days

Q-428: What is the currency requirement for a co-pilot?

A-428: 3 take-offs and landings on an aeroplane of the same type or approved simulator within the last 90 days

Q-429: A copy of which of the following documents must be kept on the ground by an operator for the duration of each flight?

A-429: The operational flight plan

Q-430: A list to be carried in the aeroplane detailing minimum equipment required must be approved by:

A-430: country of operator

Q-431: Where is permanent approval for the carriage of dangerous goods given?

A-431: Air Operator's Certificate (AOC)

Q-432: II aeroplanes which individual certificates of airworthiness were issued after 1 January 1990 must be fitted with a flight data recorder when their maximum certificated take-off mass is greater than:

A-432: 5700 kg

Q-433: How far away can a take-off alternate be for a 2-engine aeroplane?

A-433: 120 mins at normal cruise speed

Q-434: If there is unauthorized use of equipment that affects the aeroplane's system, the commander:

A-434: must not authorize its use

Q-435: The Minimum Equipment List (MEL) gives the equipment which can be inoperative when undertaking a flight and the additional procedures to be observed accordingly. This list is prepared by:

A-435: the operator, and it is inserted in the OM

Q-436: The operator shall include in the OM a MEL which shall be approved by the authority of:

A-436: the country of the operator.

Q-437: At the alternate aerodrome, the commander of a turbojet engine aeroplane should have a fuel quantity (final reserve) sufficient for flying during:

A-437: 30 minutes at holding flight speed at 1500 ft.

Q-438: During a flight, the captain is informed that a passenger is using a portable electronic device, which is adversely affecting the aircraft's electrici avionics. The captain must:

A-438: stop the passenger from using the device.

Q-439: Who issues and updates the MEL?

A-439: The operator

Q-440: rom the flight deck you observe an aeroplane in the forward left position on an opposite parallel track. What Nav light will be observed?

A-440: Red

Q- 441: Above what altitude are quick-donning masks required?

A-441: 25000 ft

Q- 442: What is the requirement for the carriage of life rafts?

A-442: 120 mins or 400 NM whichever is less

Q-443: What skills constitute pilot proficiency checks?

A-443: Flying technique, emergency procedures and IFR

Q-444: Following an indication of an unserviceability whilst taxiing to the holding point, what do you consult first?

A-444: MEL

Q-445: How often should pilot proficiency checks be performed?

A-445: 2 within a year, more than 4 months between checks

Q-446: A modern aircraft must be provided with a flight data recorder when its certified MTOM is greater than:

A-446: 5700 kg

Q-447: Flight crew members on the flight deck shall keep their safety belt fastened:

A-447: while at their station

Q-448: On an ILS, you are told that the weather has dropped below company minima. When must you abort the approach?

A-448: Outer marker

Q-449: What is the oxygen requirement for the crew and 100% of the passengers in an unpressurized aircraft?

A-449: 13000 ft

Q-450: Who compiles the MEL and where does it go?

A-450: The operator and in the OM

Q-451: Who provides the operations personnel with the OM and the amendments to keep it up to date?

A-451: aircraft operator

Q-452: The OPS document is based on:

A-452: ICAO Annex 6

Q-453: what is the requirement regarding the carriage of a CVR for aircraft registered before April 1998?

A-453: Record last 30 mins of flight

Q-454: On an NDB approach with an MDH of 360 ft and a required RVR of 1500 m and a reported met vis of 2500 m, when can you start an approach? i.e. which is most correct?

A-454: With any cloud base

Q-455: who is responsible for ensuring that the aeroplane is airworthy prior to flight?

A-455: captain

Q-456: Destination alternate for a turbojet - what is the required fuel overhead?

A-456: 30 minutes at 1500 ft in standard conditions.

Q-457: What is required for navigation in IMC?

A-457: Radio equipment and equipment for guidance until the visual point.

Q-458: Who is to ensure safe handling of flights?

A-458: the operator

Q-459: On board a pressurized aircraft, a flight shall be undertaken only if the aircraft is provided with an oxygen reserve enabling all crew members and all of the passengers to be

supplied with oxygen in the event of cabin depressurization, throughout the flight period, during which the pressure altitude is greater than:

A-459:13000ft

Q-460: The MEL is drawn up by the:

A-460: operator and may be more restrictive than the MMEL

Q-461: Above what altitude are quick-donning masks required?

A-461: 25000 ft

Q-462:What is the requirement for the carriage of life rafts?

A-462: 120 mins or 400 NM whichever is less

Q-463: What skills constitute pilot proficiency checks?

A-463: Flying technique, emergency procedures and IFR

Q-464: following an indication of an unserviceability whilst taxiing to the holding point, what do you consult first?

A-464: MEL

Q-465: How often should pilot proficiency checks be performed?

A-465: 3 checks within the year with no less than 4 months between checks

Q-466: modern aircraft must be provided with a flight data recorder when its certified MTOM is greater than:

A-466: 5700 kg

Q-467: Flight crew members on the flight deck shall keep their safety belt fastened:

A-467: while at their station

Q-468:On an ILS, you are told that the weather has dropped below company minima. When must you abort the approach?

A-468: Outer marker

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A-469: 13000 ft

Q-470: Who compiles the MEL and where does it go?

A-470: The operator and in the OM

Q-471: Who provides the operations personnel with the OM and the amendments to keep it up to date?

A-471: Aircraft operator

Q-472: The OPS document is based on:

A-472: ICAO Annex 6

Q-473: What is the requirement regarding the carriage of a CVR for aircraft registered before April 1998?

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Q-474: On an NDB approach with an MDH of 360 ft and a required RVR of 1500 m and a reported met vis of 2500 m, when can you start an approach? i.e. which is most correct?

A-474: With any cloud base

Q-475: Who is responsible for ensuring that the aeroplane is airworthy prior to flight?

A-475: Captain

Q-476: Jestination alternate for a turbojet - what is the required fuel overhead?

A-476: 30 minutes at 1500 ft in standard conditions.

Q-477: What is required for navigation in IMC?

A-477: Radio equipment and equipment for guidance until the visual point

Q-478: Who is to ensure safe handling of flights?

A-478: The operator

Q-479: On board a pressurized aircraft, a flight shall be undertaken only if the aircraft is provided with an oxygen reserve enabling all crew members and all of the passengers to be supplied with oxygen in the event of cabin depressurization, throughout the flight period, during which the pressure altitude is greater than:

A-479: 13000ft

Q-480: The MEL is drawn up by the:

A-480: operator and may be more restrictive than the MMEL.

Q-481: What must be ensured with respect to navigation equipment?

A-481: The failure of one piece does not affect another

Q-482: The Minimum Equipment List (MEL) is established by the:

A-482: airline operator

Q-483: FDRs must keep data and parameters for at least the last;

A-483: 10 hours of operation

Q-484: When do you not need a destination alternate aerodrome?

A-484: If there is a reasonable certainty that at the ETA at the destination aerodrome and a reasonable time before and after you can expect VMC

Q-485: When are all flight crew members required to be at their stations?

A-485: At all times except when they need to leave for operational or physiological reasons.

Q-486: When are life jackets required?

A-486: 50 NM from land

Q-487: Supplemental oxygen is used to:

A-487: provide oxygen to passengers who might require it, following a cabin depressurization

Q-488: We shall not initiate any flight made in accordance with instrument flight rules unless the available information indicates that the conditions at the aerodrome of intended destination and destination alternate (if one is required) are, at the predicted time of:

A-488: arrival equal to or better than the minimum conditions required for aerodrome use

Q-489: Who is the operator to provide an operations manual for?

A-489: Operations staff

Q-490: To act as co-pilot for take-off or landing you must have:

A-490: acted as PIC or co-pilot on type in the last 90 days

Q-491: Who checks, before flight, that the aircraft's weight is such that the flight can be safely made, and that any transported cargo is properly distributed and secured?

A-491: The captain

Q-492: Where is the Minimum Equipment List?

A-492: In the OM

Q-493: What is the co-pilot currency requirement?

A-493: At the controls for 3 take-offs and landings in the last 90 days

Q-494: Where is the general information about the carriage of dangerous goods to be found?

A-494: OM

Q-495: The recent experience conditions of a captain assigned to a flight on an aircraft by an operator must not be less than:

A-495: 3 take-offs and 3 landings as pilot in command on this type of aircraft during the last 90 days

Q-496: Information concerning evacuation procedures can be found in the:

A-496: OM

Q-497: When are flight crew allowed to leave their stations?

A-497: In the performance of their duties

Q-498: A piece of equipment on your public transport aeroplane fails while you are still parked.

The reference document you use to decide on the procedure to follow is the:

A-498: MEL

Q-499: When refuelling is being conducted with passengers embarking or disembarking:

A-499: communications shall be maintained by ground crew and qualified crew on board

Q-500: Aeroplanes with a take-off mass greater than 5700 kg shall be fitted with an independent automatically operated emergency power supply to operate and illuminate the artificial horizon for:

A-500: 30 mins

Q-501: Individual aircraft should be weighed in an air-conditioned hangar:

A-501: all the above

Q-502: The CG position is:

A-502: able to exist within a range

Q-503: If an aeroplane comes into land below its MSLM but above the PLLM for the arrival airfield:

1. airframe structural damage will occur
2. tyre temperature limits could be exceeded
3. the runway length might be inadequate
4. a go-around might not be achievable
5. brake fade could occur

A-503: 2, 3, 4 and 5 only .

Q-504: Which of the following would not affect the CG position?

A-504: Horizontal stabilator trim setting

Q-505: For a conventional light aeroplane with a tricycle undercarriage configuration, the higher the take-off mass

1. stick forces at rotation will increase.
2. range will decrease but endurance will increase.
3. gliding range will reduce.
4. stalling speed will increase.

A-505: statements 1 and 4 only are correct

Q-506: Due to a mistake in the load sheet the aeroplane is 1000 kg heavier than you believe it to be. As a consequence:

A-506: VMU will be later

Q-507: The datum for the balance arms has to be along the longitudinal axis:

A-507: but does not have to be between the nose and the tail.

Q-508: if a compartment takes a maximum load of 500 kg, with a running load limit of 350 kg/m and a distribution load limit of 300 kg/m? max, which of following boxes, each of 500 kg, can be carried?

1. 100 cm x 110 cm x 145 cm
2. 125 cm x 135 cm x 142 cm
3. 120 cm x 140 cm x 143 cm
4. 125 cm x 135 cm x 144 cm

A-508: Either of boxes 3 and 4 with their longest length parallel to the aircraft longitudinal axis.

Q-509: An aircraft is flying at 1.3VS1g in order to provide an adequate margin above the low speed buffet and transonic speeds.

If the 1.3VS1g speed is 180 kt CAS and the mass increases from 285000 kg to 320000 kg, what is the new 1g stalling speed?

A-509: 146.7 kt, drag will increase and nautical mile per kg fuel burn will decrease

Q-510: Standard masses for baggage can be used for aircraft with:

A-510: 20 seats or more

Q-511: The distance from the datum to the CG is:

A-511: the balance arm

Q-512: If the maximum structural landing mass is exceeded:

A-512: the undercarriage could collapse on landing

Q-513: If the aeroplane was neutrally stable this would suggest that:

A-513: the CG is behind the rear limit

Q-514: In Mass & Balance terms, what is an index?

A-514: A moment divided by a constant

Q-515: Determine the position of the CG as a percentage of the MAC given that the balance arm of the CG is 724 and the MAC balance arms are 517 to 1706:

A-515: 17.4% m

Q-516: Define the useful load:

A-516: traffic load plus usable fuel mass

Q-517: Use CAP 696, Section 4, MRJ1, as appropriate. Prior to departure an MRJT is loaded with maximum fuel of 20100 liter at an SG of 0.

Calculate the maximum allowable traffic load that can be carried given the following data:

- PLTOM 67200 kg
- PLLM 54200 kg
- DOM 34930 kg
- Taxi fuel 250 kg
- Trip fuel 9250 kg
- Contingency and holding fuel 850 kg
- Alternate fuel 700 kg

A-517: 12442

Q-518: An aircraft is about to depart on an oceanic sector from a high elevation airfield with an exceptionally long runway in the tropics at 1400 local time

A-518: climb gradient

Q-519: The useful load is:

A-519: TOM minus the DOM

Q-520: fwd... cargo hold?

Use CAP 696, MRJT 1, fig 4.9. What is the balance arm, the maximum compartment load and the running load for the most aft compartment of the

A-520: 421.5 inches 2059 kg 13.12 kg per inch

Q-521: What is the purpose of trim tabs?

A-521: to reduce stick forces to zero

Q-522: Which of the following statements regarding an electric circuit is correct?

A-522: too high a current may lead to the circuit overheating

Q-523: When an aircraft fitted with a classic air-driven artificial horizon decelerates after landing, a wrong indication will be displayed showing a:

A-523: descending turn to left

Q-524: Which of the following are all aerodynamic balances?

A-524: Horn balance, balance tab and internal balance.

Q-525: What can be said about the height of the Tropopause in the Northern Hemisphere?

A-525: It decreases from south to north

Q-526: A turbo-supercharger impeller is driven by:

A-526: diversion of exhaust gases by the waste gate using energy that would otherwise be wasted

Q-527: propeller blade angle is

A-527: the angle between the blade chord and the plane of rotation

Q-528: the purpose of an ignition switch is to

A-528: control the primary circuit of the magneto

Q-529: What is the correct phrase for a pilot to use to advise ATC of being ready to take-off?

A-529: ready for departure

Q-530: The skin of a modern pressurised aircraft:

A-530: is a primary load bearing structure carrying much of the loads

Q-531: The ILS Localiser operates in the following frequency band:

A-531: 108.0- 112.0 MHz

Q-532: The minimum separation between VHF frequencies in Europe is:

A-532: 8.33 kHz

Q-533: The weight of an aeroplane, which is in level non accelerated flight, is said to act:

A-533: vertically through the centre of gravity

Q-534: During a climb a blocked static pressure supply line causes the ASI to:

A-534: under-indicate

Q-535: What is the shortest distance between two points on the Earth's globe called:

A-535: great circle

Q-536: Flutter may be caused by a:

A-536: distortion by bending and torsion of the structure causing increasing vibration in the resonance frequency.

Q-537: Leaving ground effect at a given angle of attack the:

A-537: effective angle of attack decreases.

Q-538: What does TEM stand for in the context of Human Performance?

A-538: threat and error management

Q-539: What is the effect on Mach No and TAS when climbing at a constant CAS?

A-539: both increase

Q-540: With regards to the Maximum Zero Fuel Weight (MZFW):

A-540: It is the maximum weight that an aircraft can be loaded to without useable fuel.

Q-541: The oil in an oleo-pneumatic strut:

A-541: limits the speed of compression of the strut

Q-542: An aircraft is approaching a DME Beacon at 40000 ft, and slant range is 15 NM. What is the ground distance to the nearest NM?

A-542: 13NM

Q-543: Which of the following statements regarding an electric circuit is correct?

A-543: Too high a current may lead to the circuit overheating

Q-544: In relation to persons with Reduced Mobility (PRM's):

A-544: The commander must be notified when PRM's are carried

Q-545: When selecting a fuse for an aircraft electrical circuit, the governing factor is:

A-545: the power requirement of the circuit

Q-546: Following an indication of unserviceability of an air conditioning pack whilst on stand, what do you consult?

A-546: MEL

Q-547: the balance arm is:

A-547: The distance from the datum to the CG

Q-548: The inbound track to the navigation aid serving a hold is 250°, your aircraft heading is 002°. What is the correct sector to join the hold?

A-548: sector 2 (offset)

Q-549: To achieve the maximum range over the ground with a headwind, a turbojet should fly:

A-549: At a speed faster than 1,32 VMD

Q-550: Following an indication of unserviceability of an air conditioning pack whilst on stand, what do you consult first?

A-550: mel

Q-551: In relation to Persons with Reduced Mobility (PRM's):

A-551: The commander must be notified when PRM's are carried

Q-552: Which of the following statements is true

A-552: Flight in severe turbulence may lead to a stall and/or structural limitations being

exceeded.

Q-553: If an extra load is loaded into an aircraft the stall speed is likely to:

A-553: increase

Q-554: a hot busbar is one that

A-554: is permanently connected to the battery

Q-555: Which of the following statements is true?

A-555: Aluminium alloys are used in aircraft construction because they are light, easily machined and have good wear resistance

Q-556: A logarithmic scale is fitted to the vertical speed indicator in order to:

A-556: make lower values of vertical speed easier to read

Q-557: The result of empty field myopia is:

A-557: Focusing is limited to between 1 and 2 meters

Q-558: A pilot, trying to pick up a fallen object from the cockpit floor during a right turn, experiences:

A-558: Coriolis illusion/effect

Q-559: Which of the following statements is correct?

A-559: batteries are considered dangerous goods if transported due to the risk of thermal runaway and the substances inside

Q-560: The result of Empty Field Myopia is:

A-560: focusing is limited to between 1 and 2 meters

Q-561: A turbo-supercharger impeller is driven by:

A-561: A.

Diversion of exhaust gases by the waste gate using energy that would otherwise be wasted

Q-562: The ILS Outer Marker is identified by:

A-562: A blue cockpit light and a modulating frequency of 400 Hz

Q-563: The phrase "all stations" is used to transmit to:

A-563: A broadcast to all stations on frequency

Q-564: What are the meteorological prerequisites, at low level, for thunderstorms formed by lifting processes, over land?

A-564: High temperature, high humidity

Q-565: What does TEM stand for in the context of Human Performance?

A-565: Threat and Error Management

Q-566: ADME & VOR are co-located and a morse ident is detected 4 times in 30 secs. Which of the following statements is true?

A-566: DME callsign once every 30 secs and higher in pitch than the VOR ident

Q-567: When selecting a fuse for an aircraft electrical circuit, the governing factor is:

A-567: The power requirement of the circuit

Q-568: You are flying IFR in VMC and experience a complete radio failure. What action should you take?

A-568: Continue VMC and land at the nearest aerodrome squawking 7600. Report arrival to ATC after landing

Q-569: ELR is 1°C/100m:

A-569: neutral when dry

Q-570: An under-inflated tyre on a dry runway:

A-570: increase wear on the shoulder

Q-571: power is

A-571: The rate at which a component uses energy

Q-572: At high altitude, the stall speed (IAS):

A-572: increases

Q-573: Which of the following statements is true?

A-573: Aluminium alloys are used in aircraft construction because they are light, easily machined and have good wear resistance

Q-574: With regards to the Maximum Zero Fuel Weight (MZFW):

A-574: It is the maximum weight that an aircraft can be loaded to without useable fuel

Q-575: A logarithmic scale is fitted to the vertical speed indicator in order to:
A-575: Make lower values of vertical speed easier to read

Q-576: When are lifejackets required?

A-576: 50 NM from land

Q-577: An increase in wing loading will:

A-577: Increase the stall speed

Q-578: If you are flying IFR to a destination with no alternate, when must the weather forecast be good for you to continue?

A-578: 1 hour before to 1 hour after ETA

Q-579: What distance does the DME display:

A-579: slant range in NM

Q-580: What is the speed limitation in the hold for class A & B aircraft below 14000 ft?

A-580: 170 kt

Q-581: You are flying IFR in VMC and experience a complete radio failure. What action should you take?

A-581: Continue VMC and land at the nearest aerodrome squawking 7600. Report arrival to ATC after landing

Q-582: Readability 1 means that the transmission is?

A-582: unreadable

Q-583: Compared with stalling airspeed (V_s) in a given configuration, the airspeed at which the stick shaker will be triggered is?

A-583: Greater than V_s

Q-584: What distance does the DME display?

A-584: Slant range in NM

Q-585: The ILS Localizer operates in which frequency band?

A- 108.0-112.0 MHZ

Q-586: If you are flying at FL300 in an air mass that is 15°C warmer than a standard atmosphere, what is the outside temperature likely to be?

A-586: -30°C

Q-587: During which stage of thunderstorm development are rotor winds characterized by roll clouds most likely to occur?

A-587: mature stage

Q-588: An aircraft lands at an aerodrome of another Contracting State for technical reasons. What freedom of the air is applicable in this case?

A-588: 2nd freedom of the air

Q-589: Two 12v40 Ah batteries connected in parallel will produce?

A-589: 12v80Ah

Q-590: Which VDF bearing is accurate within 5 degrees?

A-590: class B

Q-591: Which of the following are all aerodynamic balances?

A-591: Horn balance, balance tab and internal balance.

Q-592: The rigidity of a gyro is improved by?

A-592: increasing the rpm and concentrating the mass on the periphery of the rotor

Q-593: What is the frequency range of the airband?

A-593: 108.0 - 137.0 MHz

Q-594: The purpose of an ignition switch is to:

A-594: control the primary circuit of the magneto

Q-595: When selecting a fuse for an aircraft electrical circuit, what is the governing factor?

A-595: the power requirement of the circuit

Q-596: To achieve the maximum range over the ground with a headwind, a turbojet should fly?

A-596: at a speed faster than 1.32VMD

Q-597: Loads must be adequately secured in order to?

A-597: Avoid unplanned C of G movement and aeroplane damage

Q-598: The skin of a modern pressurized aircraft:

A-598: Is a primary load bearing structure carrying much of the loads

Q-599: If an aircraft climbs in the Standard Atmosphere below the Tropopause, at a Constant TAS the Mach Number will?

A-599: Increase because the local speed of sound is decreasing

Q-600: An aeroplane is head-on with a glider. Who has right of way?

A-600: The glider

Q-601: Which phraseology shall a pilot use if he/she receives an instruction from ATC which he/she cannot carry out?

A-601: UNABLE

Q-602: If an extra load is loaded into an aircraft the stall speed is likely to?

A-602: increase

Q-603: What is the purpose of the wing main spar?

A-603: To withstand bending and torsional loads

Q-604: An aircraft passes overhead a DME station at 12000 ft above the station. At that time the DME reading will be?

A-604: • Approximately 2 nm.

Q-605: Identify runway remaining lighting on centerline lighting systems.

A-605: Alternate red and white lights from 3,000 feet to 1,000 feet, then red lights to the end.

Q-606: 6 When are lifejackets required?

A-606: 50NM from land

Q-607: A pilot approaching an upslope runway

A-607: may feel that he is higher than actual. This illusion may cause him to land short

Q-608: One advantage of using VHF for voice communications over HF is?

A-608: VHF is less affected by atmospheric noise and electrical equipment

Q-609: If temperature remains constant with an increase in altitude there is:

A-609: isothermal layer

Q-610: What action is required by the pilot of an aircraft station if he/she is unable to establish radio contact with an aeronautical station?

A-610: Try to establish communication with other aircraft or aeronautical stations

Q-611: The rate of climb is approximately equal to?

A-611: The still air gradient multiplied by the TAS

Q-612: If an aeroplane lands below its Max Structural Landing Mass, but above its Performance Limited Landing Mass for the arrival airfield:

- 1) It might not have sufficient runway length to stop safely
 - 2) Tire temperature limits could be exceeded
 - 3) It will increase structural fatigue
 - 4) Physical damage might be suffered as a result of the extra mass
 - 5) A go-around might not be achievable
- The combination regrouping all the correct statements is:

A-612: 1,2,3,5

Q-613: Which of the statements is true concerning squall lines?

A-613: For severe squall lines a SIGMET is issued

Q-614: How do you know you are in an overtaking position with regards to another aircraft at night?

A-614: You will see a white light

Q-615: To roll the aircraft to the right:

A-615: The aileron control is moved to the right, the right aileron goes up and the left one down

Q-616: Main and nose wheel bays are:

A-616: unpressurized

Q-617: The best L/D ratio of an aircraft in a given configuration is a value that:

A-617: Remains constant regardless of Indicated Air Speed changes

Q-618: The purpose of the primary stops in a control system is?

A-618: To set the range of movement of the control surface

Q-619: The phrase "take-off" is used by a pilot:

A-619: Only to acknowledge take-off clearance

Q-620: The phrase "say again" means?

A-620: Repeat the entire message

Q-621: You are on a flight in accordance with IFR in IMC, exactly on the current flight plan route.

At 18:36 UTC you receive and acknowledge the following instruction from the radar controller:

"Turn immediately, continue heading 050 degrees until further advised".

At 18:37 UTC you find out that radio communication cannot be established again. You will:

A-621: Return to your current flight plan route

Q-622: Select the correct statement for the Datum:

A-622: Is a fixed vertical plane from which all the arm distances are measured

Q-623: Which of the following sequences might be encountered when flying into a microburst?

A-623: Increased headwind, followed by down-draught, followed by increased tailwind on the approach, or following take-off.

Q-624: The actual zero fuel weight is:

A-624: The aircraft basic operation weight + payload. And must not exceed the maximum design zero fuel weight

Q-625: What is correct about Fly-by / Fly-over

A-625: A fly-by waypoint is a waypoint which requires turn anticipation to allow tangential interception of the next segment of a route or procedure

Q-626: The signal from pilot to the signalman (marshaller) which means "brakes applied" is:

A-626: Raise arm and hand, with fingers extended, horizontally in front of face, then clench fist

Q-727: You receive this ATC clearance

.....CLEARED TO THE ABC VORTAC.

HOLD SOUTH ON THE ONE EIGHT

ZERO RADIAL..."

What is the recommended procedure to enter the holding pattern?

A-727: direct only

Q-728: On a summer day, the following observations are made in Zurich:

0450Z 24009 KT 7000 SCT040 SCT120

15/12 Q1014 NOSIG =

0650Z 24010KT 6000 SCT040 SCT120

17/13 Q1012 NOSIG =

0850Z 23014KT 8000 BKN100 19/13

Q1009 BECMG 26020G35KT TS = 1050Z 28022G33KT 4000 TSRA SCT015 SCT050CB OVC080

16/14

Q1006 BECMG NSW = 1250Z 31016KT

9999 SCT025TCU BKN030 13/09 Q1009

NOSIG =

1450Z 30012KT 9999 SHRA

BKNO20TCU 14/10 Q1011 NOSIG = 1650Z 30009KT SCT025 BKN035 13/10

Q1013 RESHRA NOSIG = 1850Z 28006KT 9999 SCT040 11/09

Q1014 NOSIG =

2050Z 26004KT CAVOK 10/08 Q1015

NOSIG =

You conclude, that...

A-728: a cold front has passed the station in the morning, and rear side weather prevailed in the afternoon

Q-729: The Cat I minimum decision height is:

A-729: 200 feet

Q-730: When the met observer reports the amount of cloud present at a station, it will be given as:

A-730: The amount of cloud, in eighths of the sky covered, using the term oktas

Q-731: What approximate rate of descent is required in order to maintain a 3 degree glide path at a groundspeed of 120 kt?

A-731: 600ft/min

Q-732: The Transition Level:

A-732: Shall be the lowest flight level available for use above the transition altitude

Q-733: In an aeroplane utilising a constant frequency AC power supply, DC power is obtained from a:

A-733: Transformer Rectifier Unit

Q-734: the fuel index:

A-734: Is used to calculate the correct position of the CG due to different locations of the fuel tanks

Q-735: In a fuel system, the oil to fuel heat exchanger allows:

A-735: Jet engine oil cooling through thermal exchange with fuel flowing from tanks

Q-736: An accumulator in a hydraulic system will:

A-736: • Store fluid under pressure

Q-737: The purpose of a leading edge droop is:

A-737:

To increase wing camber, and prevent separation of the airflow when trailing edge flaps are lowered

Q-738: Using the 1 on 60 rule calculate the height on a 3 degree glide path of an aircraft 4.5 NM from touchdown

A-738: 1370 ft

Q-739: After experiencing two-way radio communications failure en route, when should a pilot begin the descent for the instrument approach?

A-739: Upon arrival at any initial approach fix for the instrument approach procedure but not before the flight plan ETA as amended by ATC

Q-740: What effect would a light crosswind have on the wingtip vortices generated by a large aeroplane that has just taken off:

A-740: The upwind vortex will tend to remain on the runway longer than the downwind vortex.

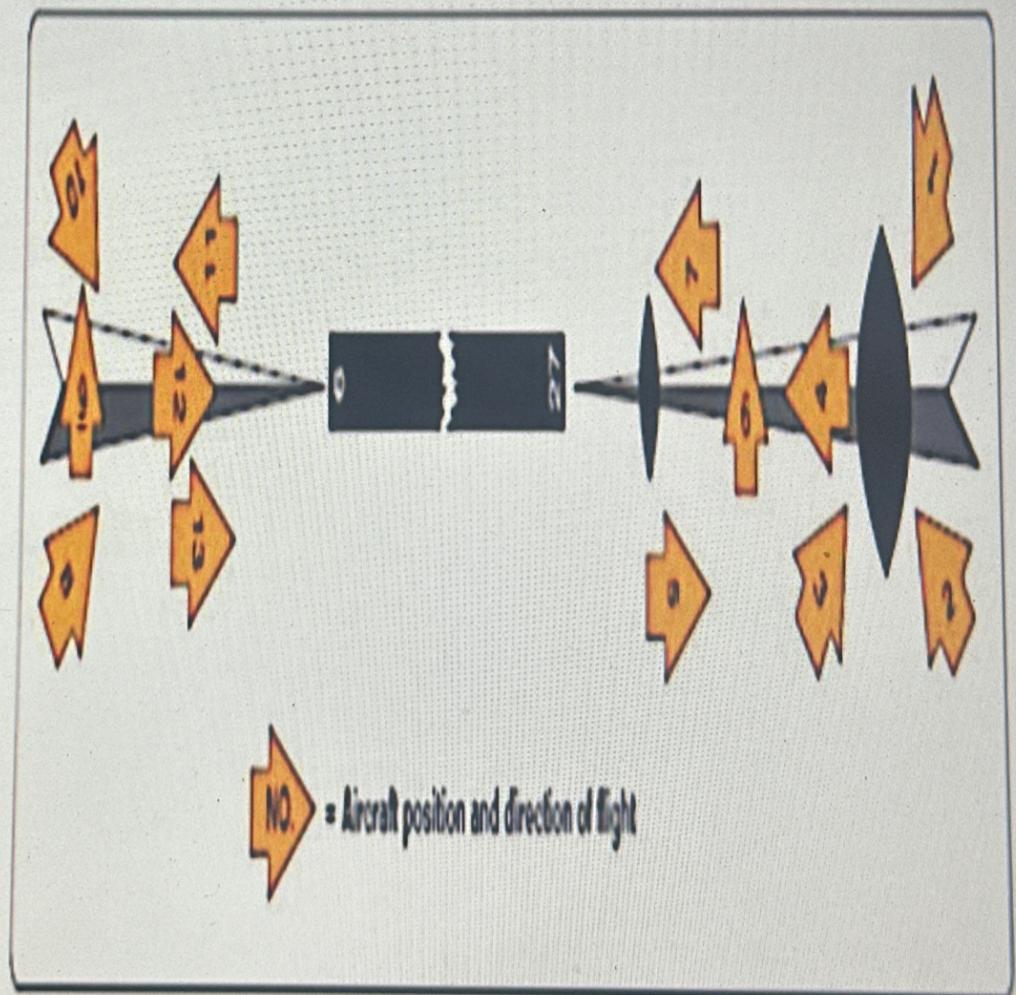
Q-741: A pilot making an approach sees 3 red lights and 1 white light on the wingbar of a PAPI. This means that:

A-741: • He is below the approach slope

Q-742: To which aircraft position(s) does HIST presentation "B" correspond?

Scanned with CamScanner

To which aircraft position(s) does HSI presentation "B" correspond?



MacBook Pro

Q-743: Which aeroplane behaviour will be corrected by a yaw damper?

A-743: dutch roll

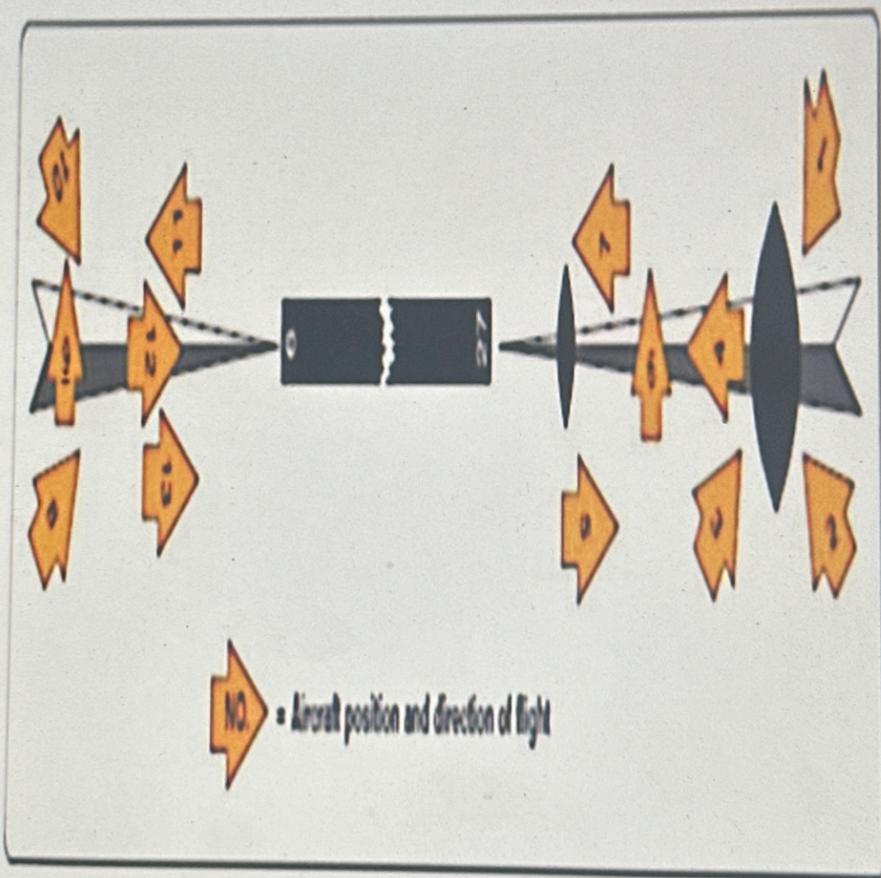
Q-744: In cruise flight, an aft centre of gravity location will:

A-744: • Decrease longitudinal static stability

Q-745: To which aircraft position(s) does HSI presentation "E" correspond?

Scanned with Cam

- 5 To which aircraft position(s) does HSI presentation "E" correspond?



MacBook Pro



Q-746: A particular instrument departure procedure requires a minimum climb rate of 210 feet per NM to 8,000 feet. If you climb with a ground speed of 140 knots, what is the rate of climb required in feet per minute?

A-746: 490

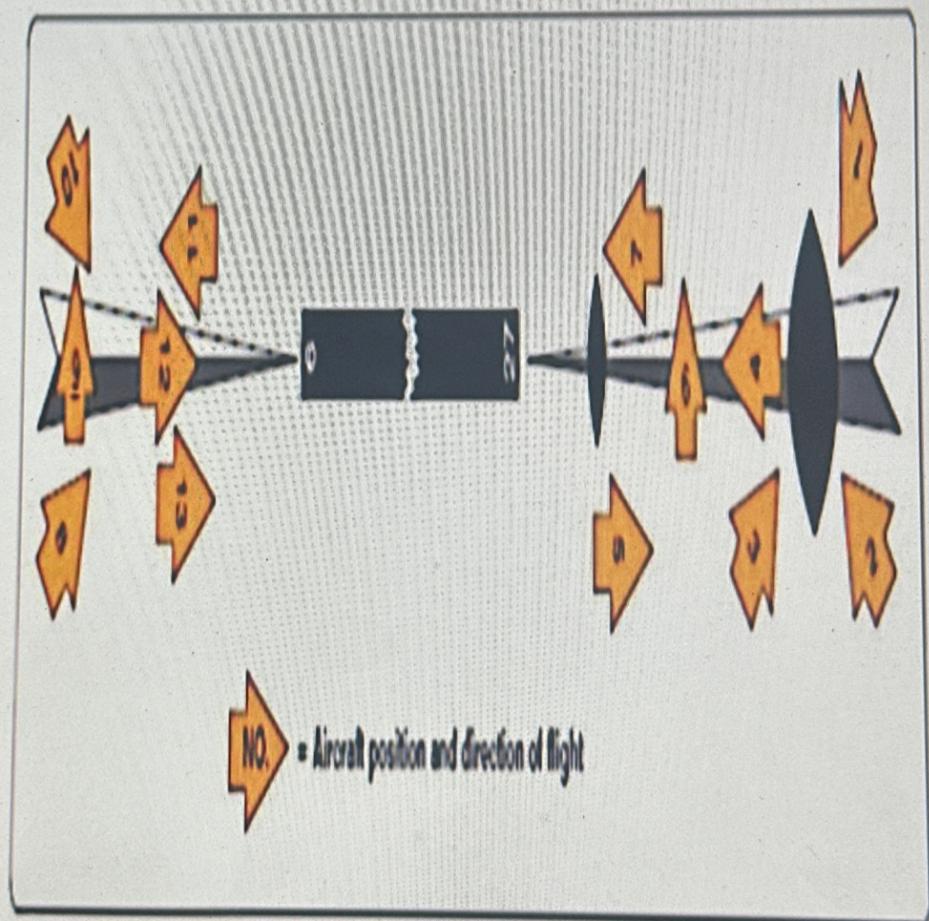
Q-747: When climbing at a constant mach number below the tropopause through an inversion:

A-747: The CAS will decrease and the TAS will increase

Q-748: To which aircraft position(s) does HSI presentation "C" correspond?

Scanned with Cam

3+ To which aircraft position(s) does HSI presentation "C" correspond?



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Q-749: On a localiser the modulations are at 150 Hz and 90 Hz.Which of the following statements is correct?

A-749: The 150 Hz modulation predominates to the right of the centre line

Q-750: rudder controls

A-750: yaw

Q-751: unavailable

Q-752: The contents of Aeronautical Information

A-752:GEN, ENR (en-route) and AD (aerodromes)

Q-753: Entering a holding pattern at FL110 with a jet aircraft, which will be the maximum speed?

A-753: 230 kts IAS

Q-754: The vertical position of an aircraft at or below the transition altitude will be reported:

A-754: as altitude

Q-755: What type of precipitation would you expect at an active unstable cold front?

A-755:Showers associated with thunderstorms

Q-756: the sweepback on a wing will:

A-756: Increase the possibility of a wing tip stall

Q-757: the operation mass:

A-757: Is the take-off mass minus the traffic load

Q-758: See the below figure.

The course selector of each aircraft is set to 360 degrees.

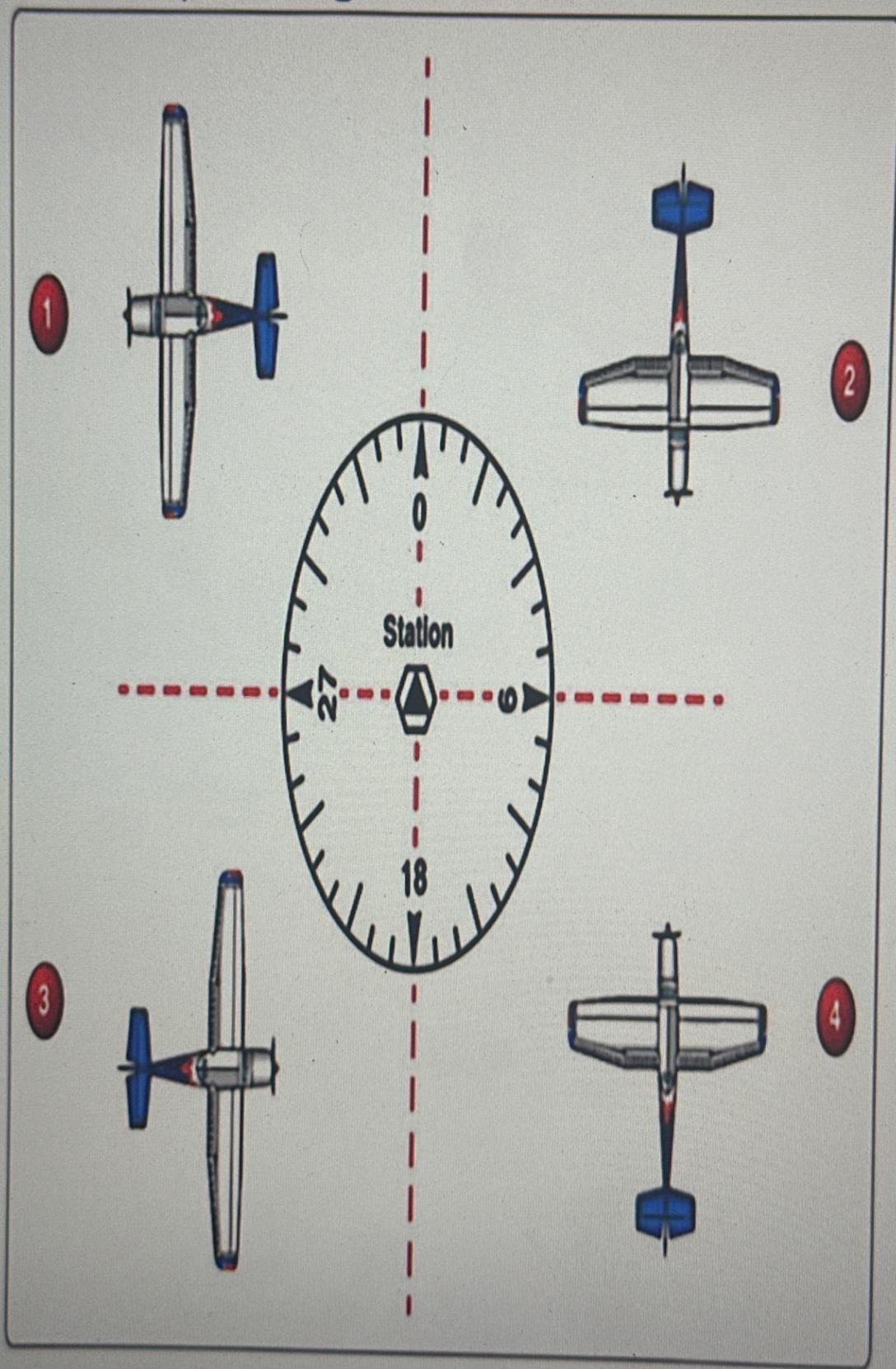
Which aircraft would have FROM indication on the TO/FROM indicator and the CDI pointing left of center?



12 / 14

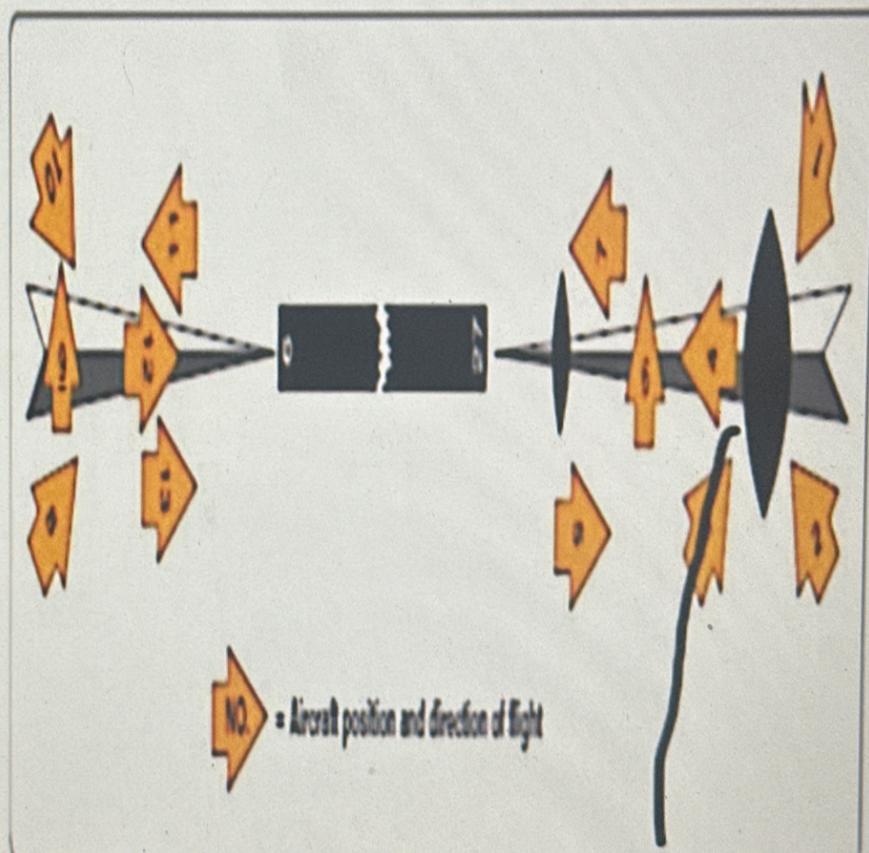
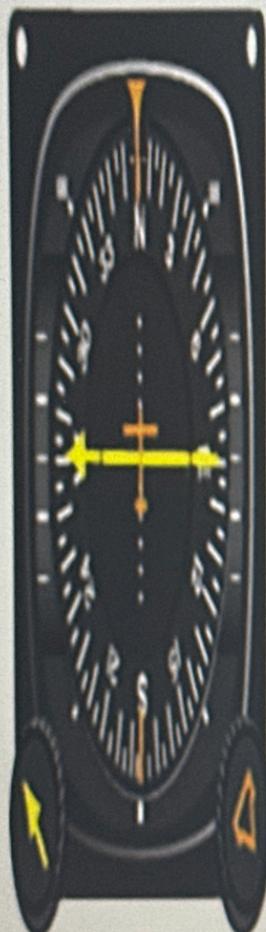


Indication on the TO/FROM indicator and
the CDI pointing left of center?



Q-759: To which aircraft position(s) does HSI presentation "A" correspond?

19 To which aircraft position(s) does HSI presentation "A" correspond?

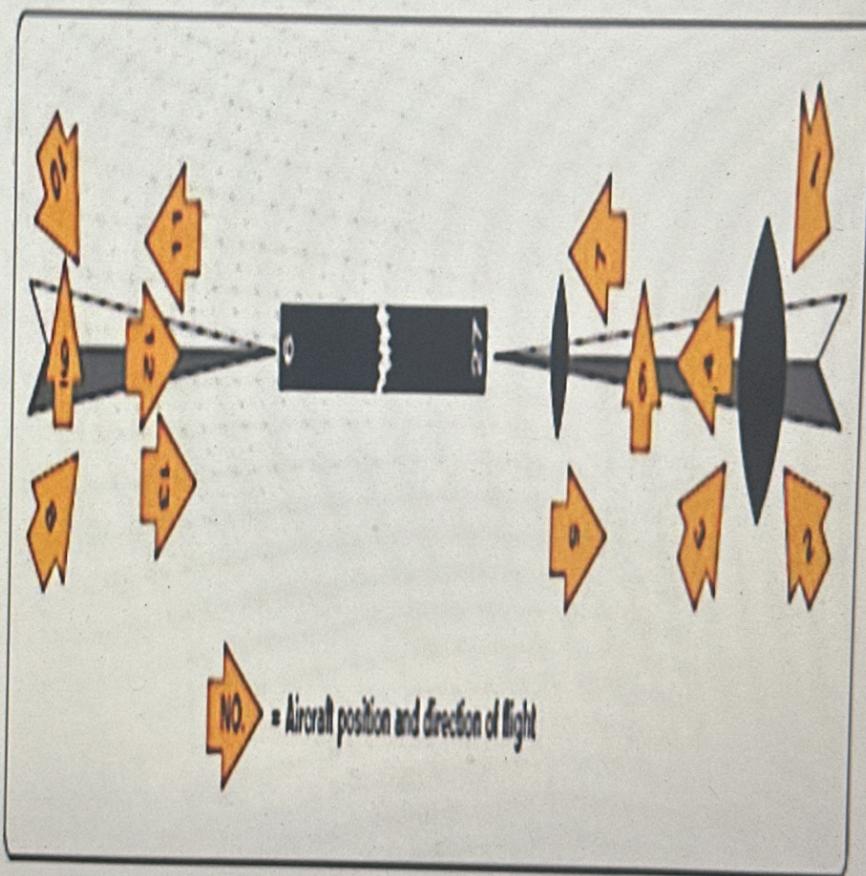


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Q-760: To which aircraft position(s) does HSI presentation "D" correspond?

20 To which aircraft position(s) does HSI presentation "D" correspond?



MacBook Pro



Q-761: With a pulse rate of 72 beats a minute and a stroke volume of 70 ml, what is the cardiac output?

A-761: 5 litres a minute

Q-762: What is the carcinogenic substance in cigarettes that can modify cells and cause cancer?

A-762: tar

Q-763: As a result of hyperventilation the blood becomes:

A-763: more alkaline

Q-764: The blood of the pulmonary vein is:

A-764: rich in oxygen and lacking in CO₂

Q-765: When blood pressure is measured during an aviation medical examination, the pressure is:

A-765: - arterial pressure in the upper arm, being equivalent to that of the heart

Q-766: Having given blood a pilot should see a doctor because of the increased susceptibility to:

A-766: hypoxia

Q-767: Human factors have been statistically proved to contribute approximately:

A-767: 70% of aircraft accidents

Q-768: A pilot should consult an aviation medicine specialist before donating blood because:

A-768: donation may lead to a reduced tolerance of altitude

Q-769: A person is suffering from anaemia when:

A-769: lacking haemoglobin

Q-770: The pressoreceptors have signalled low blood pressure. The body's response is to:

- 1. increase rate of breathing
- 2. increase cardiac output
- 3. increase heart rate
- 4. relax of the blood vessels
- 5. decrease heart rate
- 6. tighten of the blood vessels

A-770: 2, 3 and 6

Q-771: If someone is hyperventilating, the blood contains too much:

A-771: acid

Q-772: Having donated blood aircrew should:

A-772: rest supine for about 15 - 20 minutes, drink plenty of fluids and not fly for 24 hours

Q-773: Which instrument, which was introduced in the 1980s, led to the greatest reduction of accidents?

A-773: GPWS

Q-774: Smoking reduces the blood's ability to carry oxygen because:

A-774: haemoglobin has a greater affinity for CO

Q-775: Blood from the pulmonary artery is?

A-775: Low in oxygen and rich in carbon dioxide

Q-776: The oxygen-carrying capacity of a smoker who smokes 20 to 30 cigarettes a day is reduced by approximately:

A-776: 8-10%

Q-777: Who is responsible for Air Safety?

A-777: everyone involved

Q-778: The body gets its energy from:

- 1. minerals
- 2. carbohydrates
- 3. protein
- 4. vitamins

A-778: 2 & 3 only

Q-779: Haemoglobin is:

A-779: in red blood cells

Q-780: Accidents are caused by lack of:

A-780: good judgment

Q-781: Under normal conditions which gas diffuses from the blood to the alveoli?

A-781: carbon dioxide

Q-782: Which of the following statements, if any, are correct?

1. Euphoria is a possible result of hypoxia
2. Euphoria can lead to degraded decisions in flight

A-782: 1 & 2

Q-783: Concerning hypoxia, why is it more hazardous if flying solo?

A-783: It is difficult to recognize the first symptoms of hypoxia for a pilot in initial training

Q-784: Which of the following statements are correct?: Decompression sickness can be avoided by:

1. staying below 18000 ft
2. maintaining cabin pressure below 8000 ft
3. breathing 100% oxygen 30 minutes prior to and during flight
4. exercising before and during flight

A-784: 1, 2 & 3 correct

Q-785: As the body ascends, the partial pressure of oxygen within the lungs:

A-785: decreases at the same rate as that of the atmosphere

Q-786: answer c

Q-787: Hyperventilation can cause:

A-787: spasms in the muscles and possible unconsciousness

Q-788: You have been scuba diving below 10 m. When can you next fly:

A-788: after 24 hours

Q-789: The following are features of hypoxia:

1. blue discolouration of the lips and fingernails
2. shortness of breath and light-headedness
3. flatulence
4. impaired night vision

A-789: 1, 2 and 4 are correct

Q-790: Which of the following are defined in the ICAO Standard Atmosphere?

1. Pressure

2. Temperature

3. Density

4. Humidity

A-790: 1, 2 & 3

Q-791: The Critical Zone of hypoxia begins at:

A-791: 20000 ft

Q-792: On expiration there is:

A-792: higher CO₂ content than on intake

Q-793: Under normal conditions, external respiration is a subconscious process that occurs at a rate of:

A-793: 12 to 20 breaths/min, averaging 16 breaths/minute

Q-794: Time of useful consciousness at 25.000 feet with moderate activity and rapid decompression is approximately:

A-794: 2 minutes

Q-795: 100% oxygen without pressure can be used up to:

A-795: 40000ft

Q-796: DCS symptoms occur:

A-796: following loss of cabin pressure at altitudes higher than 18000 ft

Q-797: The partial pressure of carbon dioxide in the lungs is:

A-797: lower than the pressure of CO₂ in the blood

Q-798: At what altitude is pressure half that at MSL:

A-798: 18000 ft

Q-799: Short-term memory impairment occurs at what height?

A-799: 12000ft

Q-800: In an ascent, where is the greatest pressure differential?

A-800: 0- 5000ft

Q-801: The ossicles (the malleus, incus and stapes) are situated in:

A-801: middle ear

Q-802: Night flying at 10000 ft you find that your acuity decreases. What can you do about it to improve your acuity?

A-802: Go onto oxygen

Q-803: When the visual image is focused in front of the retina the condition is:

A-803: myopia

Q-804: Disorientation is most likely to occur when:

1. flying IMC
2. the pilot is distracted (using FMS for example)
3. flying from IMC to VMC
4. the pilot is unwell or fatigued

A-804: 1, 2 and 4

Q-805: A person suffering from glaucoma will have:

A-805: increased pressure of the eye

Q-806: Vertigo causes the illusion when flying of:

A-806: a tumbling or turning sensation associated sometimes with dizziness

Q-807: What is the residual volume?

A-807: 1200 ml

Q-808: Good quality sunglasses provide:

A-808: no distortion of aircraft windscreens

Q-809: The eye can adjust to:

A-809: high levels of illumination in 10 seconds and darkness in 30 minutes

Q-810: On initiating recovery from a spin, the pilot may have a strong sensation of turning:

A-810: in a direction opposite to that of the spin

Q-811: Vertigo can be caused by a blocked eustachian tube.

A-811: true

Q-812: Perceptual conflict between the vestibular apparatus and the visual sensory inputs:

1. can occur when flying IMC and may be compelling
2. can cause attitude misinformation
3. may occur when taking off bank following a sustained turn
4. can occur when decelerating

A-812: 1, 2, 3 and 4

Q-813: While turning the aircraft the pilot moves his/her head. What effect might the pilot be exposed to:

A-813: Coriolis Effect

Q-814: The function of the retina is to:

A-814: convert light signals into electrical impulses

Q-815: The metabolism of alcohol is:

A-815: influenced by time

Q-816: Which Law is relevant to decompression sickness?

A-816: Henry's Law

Q-817: What is a stereotype and involuntary reaction to a stimulation?

A-817: a reflex

Q-818: The most dangerous type of incapacitation is:

A-818: insidious

Q-819: What actions should a pilot take if suffering from vertigo?

1. Check and cross-check the aircraft instruments
2. Accept and ignore illusions
3. Keep head movements to a minimum
4. Believe the aircraft instruments

A-819: 1, 3 and 4

Q-820: Glaucoma is caused by:

A-820: excess pressure within the eye

Q-821: Stimuli must be of a certain strength for the receptors to pick them up. This is called:

A-821: sensory threshold

Q-822: It in a state of stress which is impossible to overcome, the pilot will be in a state of:

A-822: distress

Q-823: Extreme cold may be associated with:

A-823: contentment or apathy

Q-824: stressors are:

A-824: both external and internal factors

Q-825: Tuned resonance of the body parts, distressing the individual can be caused by:

A-825: resonance between 1 - 100 Hz

Q-826: Even with a small ingestion of alcohol:

A-826: the pilot will be more susceptible to hypoxia

Q-827: The sequence of GAS (General Adaptation Syndrome) is:

A-827: alarm resistance exhaustion

Q-828: If a pilot in an unpressurized aircraft suffers from severe flatulence in flight. He/she should:

A-828:i descend

Q-829: According to the "General Adaptation Syndrome" which of the following statements) is/ are correct?

1. During the alarm phase adrenalin will cause a large release of glucose into the blood, a raised heartbeat and blood pressure plus an incre in the rate and depth of breathing
2. During the resistance phase the parasympathetic system releases cortisol helping in the conversion of fat into sugar
3. During the exhaustion phase the body has to be given time to eliminate the waste products which have been generated excessively

A-829: 1, 2 & 3 are correct

Q-830: Performance can be increased by:

A-830: a moderate amount of stress

Q-831: A person that is exposed to extreme or prolonged stress factors can perceive:

A-831: distress

Q-832: An individual's perception of stress:

A-832: is the subjective evaluation of a situation and the perceived ability to cope with it

Q-834: The body loses water via:

A-834: the skin, lungs and kidneys

Q-835: Should a pilot fly with a bad cold, he/she could suffer from:

A-835: sinus, pain

Q-836: Which of the following are correct?

1. Scuba diving imposes no restriction on flying
2. Use of some medication can affect flying
3. One should drink sufficient water during flight to prevent dehydration
4. Diet does not have an effect on health

A-836: 2 & 3

Q-837: What is the relationship between stress and fatigue?

A-837: Stress can be good, fatigue is always bad

Q-838: The relationship is in the shape of an inverted U

A-838: The relationship is in the shape of an inverted U

Q-839: At height cockpit humidity can be between:

A-839: 5 - 15 %

Q-840: what will happen to the body when in situations of extreme heat

1. Shivering
2. Vasoconstriction of the exterior blood vessels
3. Sweating
4. Vasodilation of the exterior blood vessels

A-840: 3 and 4 only

Q-841: What law governs the oxygen transfer at the alveoli?

A-841: Gas Diffusion Law - Fick's Law

Q-842: Which of the following symptoms marks the beginning of hyperventilation?

A-842: Dizzy feeling

Q-843: Boyle's Law has a role to play in:

A-843: gastrointestinal tract barotrauma

Q-844: Decompression sickness (DCS) is caused by:

A-844: nitrogen coming out of solution

Q-845: Blood pressure depends on the:

A-845: cardiac output and the resistance of the capillaries

Q-846: The composition of the atmosphere at 21000 ft is approximately:

A-846: 78% N, 21% O₂ and 1% CO₂ + traces

Q-847: Circulation of the blood is for:

1. transportation of oxygen to the cells of the body
2. withdrawal of the waste products from the cells
3. convey nutrients to the cells

A-847: 1, 2 and 3

Q-848: Carbon Monoxide:

A-848: can have a severe affect on a pilot's abilities when receiving exposure for a relatively short period of time

Q-849: A few hours after landing a pilot feels pain in his/her joints. The correct action is:

A-849: see an aviation medical specialist as soon as possible

Q-850: The contents of exhaled air contains:

A-850: more CO₂ than the inhaled air

Q-851: Which of the following is true with respect to the cause of decompression sickness?

A-851: altitudes above 18000 ft in an unpressurized aircraft

Q-852: What is the normal tidal volume?

A-852: 500ml

Q-853: What chemical substance in tobacco causes addiction?

A-853: nicotine

Q-854: Among the symptoms of hypoxia are:

1. impaired judgment
2. fast and heavy breathing
3. impairment of vision
4. muscular impairment

A-854: 1, 2, 3 and 4

Q-855: Time of useful consciousness (TUC) following loss of pressurization at 35000 ft is:

A-855: 30 - 60 seconds

Q-856: Which of the following is correct concerning O₂ and blood?

A-856: Diffusion from the blood to the cells is dependent on the partial pressure of oxygen (diffusion at both tissue and alveolar levels is related to partial pressure)

Q-857: Which of the following actions is the most efficient to accelerate the release of Carbon Monoxide from the blood?

A-857: Inhalation of pressurized oxygen

Q-858: A pilot suffering from hyperventilation during final approach in poor weather can combat the effects by:

A-858: regulating depth and rate of breathing

Q-859: Dalton's Law is associated with:

A-859: hypoxia

Q-860: Which of the following factors decrease resistance to decompression sickness?

1. Body height
2. Scuba diving
3. Obesity
4. Age

A-860: 2, 3 and 4

Q-861: Which of these is a correct statement about the Earth's magnetic field?

A-861: It acts as though there is a large blue magnetic pole in Northern Canada

Q-862: Isogravities are lines that connect positions that have:

A-862: the same gravitation

Q-863: 5 hours 20 minutes and 20 seconds time difference is equivalent to which change of

longitude?

A-863: 80°05'

Q-864: The main reason that day and night, throughout the year, have different durations is due to the:

A-864: inclination of the ecliptic to the Equator

Q-865: X - 30NM - Y - 20NM - 2

ATA X is 1420. ETA Y is 1447. ATA Y is 1450. What is new ETA Z?

A-865: 1510

Q-866: On a chart, 90.74 km is represented by 7.0 centimetres. What is the scale?

A-866: 1 / **1296400**

Q-867: A - 30NM - B - 20NM - C

ATA A is 1010. ETA B is 1030. ETA C is 1043.

ATA B is 1027. What is revised ETA C?

A-867: 1038

Q-868: On a direct Mercator chart, great circles are shown as:

A-868: curves convex to the nearer pole

Q-869: The value of variation:

A-869: cannot exceed 180°

Q-870: An aircraft starts at position 0410S 17822W and heads true north for 2950 NM, then turns 90 degrees right, and maintains a rhumb line track for 314 kilometres. What is its final position?

A-870: 4500N 17422W

Q-871: At the magnetic equator:

A-871: dip is zero

Q-872: By what amount must you change your rate of descent given a 10 knot decrease in headwind on a 3° glide slope?

A-872: 50 feet per minute increase

Q-873: What is the definition of magnetic variation?

A-873: The angle between Magnetic North and True North

Q-874: Where is a compass most effective?

A-874: About midway between the earth's magnetic poles

Q-875: A Lambert's Conical conformal chart has standard parallels at 63N and 41N. What is the convergence factor?

A-875: .788

Q-876: An aircraft leaves at 0900UTC on a 250 NM journey with a planned ground speed of 115 knots. After 74 NM the aircraft is 1.5 minutes behind th planned schedule. What is the revised ETA at the destination?

A-876: 1115

Q-877: You are heading 080°(T) when you get a range and bearing fix from your AWR (Airborne Weather Radar) on a headland at 185 NM: nose. What true bearing do you plot on the chart?

A-878: 230 from the headland, using the aircraft's meridian

Q-878: Given: Airport elevation is 1000 feet. QNH is 988 hPa What is the approximate airport pressure attitude?

A-878: 1680

Q-879: A useful method of a pilot resolving, on a visual flight, any uncertainty in the aircraft's position is to maintain visual contact with the ground and:

A-879: set heading towards a line feature such as a coastline, river or motorway

Q-880: Grivation is the combination of:

A-880: variation and grid convergence

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A-881: It acts as though there is a large blue magnetic pole in Northern Canada

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A-888: curves convex to the nearer pole

Q-889: The value of variation:

A-889: cannot exceed 180°

Q-890: An aircraft starts at position 0410S 17822W and heads true north for 2950 NM, then turns 90 degrees right, and maintains a rhumb line track for 314 kilometres. What is its final position?

A-890: 4500N 17422W

Q-891: At the magnetic equator:

A-891: dip is zero

Q-892: By what amount must you change your rate of descent given a 10 knot decrease in headwind on a 3° glide slope?

A-892: 50 feet per minute increase

Q-893: What is the definition of magnetic variation?

A-893: The angle between Magnetic North and True North

Q-894: Where is a compass most effective?

A-894: About midway between the earth's magnetic poles

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A-895: .788

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A-896: 1115

Q-897: You are heading 080°(T) when you get a range and bearing fix from your AWR (Airborne Weather Radar) on a headland at 185 NM: nose. What true bearing do you plot on the chart?

A-897: 230 from the headland, using the aircraft's meridian

Q-898: Given: Airport elevation is 1000 feet. QNH is 988 hPa What is the approximate airport pressure altitude?

A-898: 1680

Q-899: A useful method of a pilot resolving, on a visual flight, any uncertainty in the aircraft's position is to maintain visual contact with the ground and:

A-899: set heading towards a line feature such as a coastline, river or motorway

Q-900: Gravitation is the combination of:

A-900: variation and grid convergence

Q-901: An aircraft at position 60°N 005°W tracks 090°(T) for 315 km. On completion of the flight the longitude will be:

A-901: 000°40'E

Q-902: In which month does aphelion occur?

A-902: july

Q-903: The pressure alt is 29000 feet and the SAT is -55°(C). What is the density altitude?

A-903: 27500 feet

Q-904: What is the highest latitude listed below at which the sun will rise above the horizon and

set every day?

A-904: 66°N

Q-905: Ground speed is 540 knots. 72 NM to go. What is the time to go?

A-905: 8 min

Q-906: The scale on a Lambert's conformal conic chart:

A-906: is constant along a parallel of latitude

Q-907: a rhumb line is:

A-907: a line on the Earth which cuts all meridians at the same angle

Q-908: An aircraft at position 2700N 17000W travels 3000 km on a track of 180° (T), then 3000 km on a track of 090°(T), then 3000 km on a track of

000°(T), then 3000 km on a track of 270°(T). What is its final position?

A-908: 2700N 17318W

Q-909: You are heading 345°(M), the variation is 20°E, and you take a radar bearing of 30° left of the nose from an island. What bearing do you plot from the island?

A-909: 155°(T)

Q-910: You are on an ILS 3-degree glide slope which passes over the runway threshold at 50 feet. Your DME range is 25 NM from the threshold. What is your height above the runway threshold elevation? (Use the 1 in 60 rule and 6000 feet = 1 nautical mile)

A-910: 7550 feet

Q-911: On a particular take-off, you can accept up to 10 knots tailwind. The runway QDM is 047, the variation is 17°E and the ATIS gives the wind direction as 210. What is the maximum wind strength you can accept?

A-911: 11 knots

Q-912: An aircraft at FL370 is required to commence descent at 120 NM from a VOR and to cross the facility at FL 130. If the mean GS for the descent 288 kt, the minimum rate of descent required is:

A-912: 960 ft/min

Q-913: You fly from 49N to 58N along the 180 E/W meridian. What is the distance in kilometres?

A-913: 1000 km

Q-914: Your pressure altitude is FL55, the QNH is 998, and the SAT is +30°(C). What is the density altitude?

A-914: 8620 feet

Q-915: At 65 NM from a VOR you commence a descent from FL330 in order to arrive over the VOR at FL80. Your mean ground speed in the descent is 240 knots. What rate of descent is required?

A-915: 1540 feet/min

Q-916: The agonic line:

A-916: indicates zero variation

Q-917: Reference Jeppesen E(LO) 1, position 5211N 00706W, which of the following denotes all the symbols?

A-917: Civil airport, ILS, NDB

Q-918: On the Jeppesen E(LO)1 chart, what are the symbols at Sligo (5354.8N 00849.1 W)?

A-918: Civil airport, NDB, DME, compulsory reporting point

Q-919: On a 5% glide slope your groundspeed is 150 kt. What should be your rate of descent to maintain the glide slope?

A-919: 750 feet/min

Q-920: How does scale change on a normal Mercator chart?

A-920: Expands directly with the secant of the latitude

Q-921: Which of the following differences in latitude will give the biggest difference in the initial great circle track and the mean great circle track between two points separated by 10° change of longitude?

A-921: 60NM and 60NM

Q-922: Position A is at 70S 030W, position B is 70S 060E. What is the great circle track of B from A, measured at A?

A-922: 132°(T)

Q-923: Track = 090°(T). TAS = 460 knots, W/V = 360°(T) / 100, Variation = 12°E, Deviation = -2.

What is the compass heading and the ground speed?

A-923: 067° 450 knots

Q-924: What is the highest latitude on the Earth at which the Sun can be vertically overhead?

A-924: 23½°

Q-925: What is the dip angle at the North Magnetic Pole?

A-925: 90°

Q-926: Isogonal lines converge as follows:

A-926: at the North and South Magnetic and both Geographical Poles

Q-927: The circumference of the Earth is approximately:

A-927: 21600 NM

Q-928: What is the weight in kilograms of 380 US Gallons at a Specific Gravity of 0.78?

A-928: 1123

Q-929: What is the maximum possible value of Dip Angle at either Pole?

A-929: 90°

Q-930: What is a line of equal gravitation?

A-930: An isograv

Q-931: On a particular direct Mercator wall chart, the full length of the parallel of latitude at 53N is 133 cm long. What is the scale of the chart at 30S?

A-931: 1: **26000000**

Q-932: An aircraft's compass must be swung:

A-932: if the aircraft has been subjected to hammering

Q-933: What is the reason for seasonal changes in climate?

A-933: Because the Earth's spin axis is inclined to the plane of its orbit round the Sun

Q-934: The value of magnetic variation on a chart changes with time. This is due to:

A-934: movement of the magnetic poles, which can cause either an increase or a decrease

Q-935: You leave A to fly to B, 475 NM away, at 1000 hours. Your ETA at B is 1130. At 1040, you

are 190 NM from A. What ground speed is required to arrive on time at B

A-935: 342 knots

Q-936: An aircraft departs a point 0400N 17000W and flies 240 NM South, followed by 240 NM East, then 240 NM North, then 240 NM West. What is its final position?

A-936: 0400N 170°35.9'W

Q-937: The angle between True North and Magnetic North is known as:

A-937: variation

Q-938: Civil Twilight occurs between:

A-938: sunset and 6° below the horizon

Q-939: An aircraft is at 5530N 03613W, where the variation is 15W. It is tuned to a VOR located at 5330N 03613W, where the variation is 12W. What VOR radial is the aircraft on?

A-939: 012

Q-940: An aircraft is at 10°N and is flying North at 444 km/hour. After 3 hours the latitude is:

A-940: 22°N

Q-941: please refer to appendix A. What is the chart symbol for a lightship.

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AON General NAV ATPL test 4.pdf

Please refer to Appendix A. What is the chart symbol for a lightship?

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A 6

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Q-943: At what latitude does the maximum difference between geodetic and geocentric latitude occur?

A-943: 45°

Q-944: Given: Aircraft height = 2500 feet, ILS GP angle = 3°, at what approximate distance from the threshold can you expect to intercept the glide-path?

A-944: 8.0NM

Q-945: On a chart, meridians at 45N are shown every 10 degrees apart. This is shown on the chart by a distance of 14 cm. What is the scale?

A-945: 1: 5600000

Q-946: Please refer to Appendix A. What is the chart symbol for an NDB?

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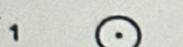
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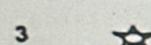
Please refer to Appendix A. What is the chart symbol for an NDB?



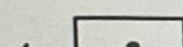
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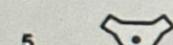
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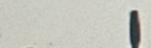
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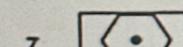
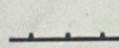
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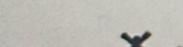
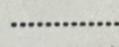
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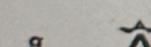
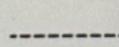
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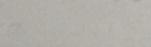
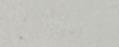
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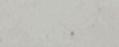
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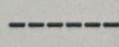
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2



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Q-947: An island is observed to be 15° (T)o the left. The aircraft heading is 120° (M), variation 17° (W). The bearing ($^{\circ}$ T) from the aircraft to the island is:

A-947: 088

Q-948: An aircraft at position 0000N/S 16327W flies a track of 225° (T) for 70 NM. What is its new position?

A-948: 0049S 16416W

Q-949: At what times of the year does the length of the hours of daylight change most rapidly?

A-949: Spring Equinox and Autumn Equinox

Q-950: Your position is 5833N 17400W. You fly exactly 6 NM westwards. What is your new position?

A-950: 5833N 17411.5W

Q-951: The aircraft position is at 5330N 00800W. The VORs are tuned to Shannon (SHA, 5243N 00853W) and Connaught (CON, 5355N 00849W)

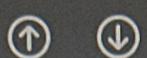
Which radials will be indicated (SHA / CON)?

A-951: 042 / 138

Q-952: Please refer to Appendix A. What is the chart symbol for a VOR/DME?

A-952:

General NAV... x

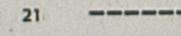
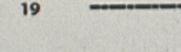
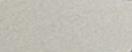
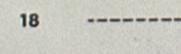
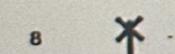
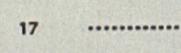
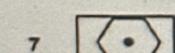
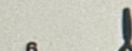
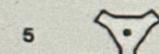
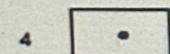
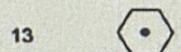
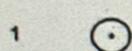


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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Please refer to Appendix A. What is the chart symbol for a VOR/DME?



6



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Q-953: An aircraft is flying around the Earth eastwards along the 60N parallel of latitude at a ground speed of 360 knots. At what ground speed would another aircraft have to fly eastwards along the Equator to fly once round the Earth in the same journey time?

A-953: 720 knots

Q-954: Which of the following conversions from True to Compass is the correct one (True / Variation / Magnetic / Deviation / Compass)?

A-954: 130 / 2W / 132 / -1 / 133

Q-955: What is the effect on the Mach number and TAS in an aircraft that is climbing with constant CAS?

A-955: Mach number increases, TAS increases

Q-956: What is the chart convergence factor on a Polar Stereographic chart?

A-956: 1.0

Q-957: If variation is East, then:

A-957: true North is West of Magnetic North

Q-958: The chart that is generally used for navigation in polar areas is based on a:

A-958: Stereographic projection

Q-959: Convert 80 metresee into knots,

A-959: 155 knots

Q-960: A Lambert conformal conic chart has a constant of the cone of 0.80. A straight line course drawn on this chart from A (53°N 004°W) to B is 080° at A, course at 8 is 092". What is the longitude of B?

A-960: 011°E

Q-961: A modern radio altimeter uses the frequency band:

A- SHF 3000 MHz - 30 GHz

Q-962: On a turn and slip indicator, needle to the left and ball to the right indicates:

A- left turn not enough bank

Q-963: What is used for EGT measurement?

D- Thermo EMF thermocouples

Q-964: The true altitude of an aircraft in flight is shown from:

A- pressure altitude

Q-965: Which of the following are inputs to the central processing unit of the GPWS?

A- i ii iii v

Q-966: What is density altitude?

A- Altitude in the International Standard Atmosphere at which the prevailing density would be found

Q-967: An aircraft is travelling at 120 kt, what angle of bank would be required for a rate one turn?

A-19°

Q-968: In what range is GPWS operative?

C. 2450 - 50 ft

Q-969: Why must an autopilot be synchronized when you wish to disconnect?

C. To secure against abrupt changes in aircraft attitude

Q-970 An aircraft that is assessed as not being a threat would be indicated on a TCAS system as:

C.a hollow white or cyan diamond

Q-971 What correction is given by TCAS?

A. Climb or descend

Q-972 What is another name for fail-active?

A. Fail-operational

Q-973 Using a classic attitude indicator, an aircraft performs a turn through 270° at a constant angle of bank and rate of turn. The indication is:

A. nose up bank right

Q-974 An aircraft is travelling at 100 kt forward speed on a 3° glide slope. What is its rate of descent?

A. 500 ft/min

Q-975 Under conditions determined by the International Standard Atmosphere, at MSL true airspeed:

A. equals CAS

Q-976 A radio altimeter is

A. Aircraft based and measure true height

Q-977 During descent through a block of airspace of constant temperature and while flying at a constant Mach No. will cause the CAS to:

A. Increase

Q -978 The needle and ball of a turn indicator are both to the left of the datum. This indicates:

A. A left turn with too much bank

Q-979 Which of the following are modes of the GPWS?

A. i ii iii v

Q-980 If the total pressure sensor supply line leaks, and with the drain element blocked, in a non-pressurized aircraft this will cause the ASI to:

A. under-read

Q-981: The period of validity of an FMS data base is:

A- 28 days

Q-982: A gravity-erecting device is utilized in:

A- an artificial horizon

Q-983: True heading can be converted into magnetic heading using a compass and:

A- a map with isogonal lines

Q-984: An aircraft flies into a colder airmass. This will cause the altimeter to:

A- over-read

Q-985: An inertial reference system is aligned when turned on so as to:

A- calculate the computed trihedron with reference to the earth

Q-986: In a solid state gyroscope the purpose of the dither motor is to:

A- overcome laser lock

Q-987: Total air temperature is _____ than static air temperature and the difference varies with _____

A- Warmer CAS

Q-988: The rigidity of a gyroscope can be improved by:

A- increasing the angular momentum and concentrating the mass on the periphery of the rotor

Q-989: Why is there a vibration device in a pressure altimeter?

- I. To prevent hysteresis
- II. To prevent 6el in a mechanical system
- iii. To keep pilots happy during long flights
- iiii. To prevent icing
- v. To overcome dither

A- i ii

Q-990: An IRS differs from an INS in that it:

A- Has a shorter spin-up time suffers from laser lock

Q- 991: in an IRS:

A- accelerometers and gyros are both strapped down

Q-992: What does the white arc on a temperature scale indicate?

A- Normal operating temperature

Q-993: With the aircraft weight constant but variations in airfield altitude, take-off will always be at a constant:

A- Calibrated airspeed

Q-994: When accelerating on a northerly heading what does the direct reading magnetic

compass indicate?

A- North

Q-995: A rate integrating gyroscope is used in:

- i. inertial attitude system
- ii. automatic flight control systems
- iii. inertial navigation systems
- iv. rate of turn indicators

A- i iii

Q-996: A blockage occurs in the ram air source and the drain-hole. The ASI in a nonpressurized aircraft will:

A- act like an altimeter

Q-997: The errors associated with the directional indicator are:

- i. earth rate
- ii. transport wander
- iii. banking when pitched up
- iv. annual movement of the poles
- v. mechanical problems

A- i ii iii v

Q-998: Which of the following correctly describes the gyroscope of a rate of turn indicator?

- i. 1 degree of freedom
- ii. 2 degrees of freedom
- iii. Its frame is held by two springs
- iv. Its spin axis is parallel to the pitch axis
- v. The spin axis is parallel to the yaw axis
- vi. The spin axis is horizontal

A- i iii iv

Q-999: The rate of turn indicator is a very useful gyroscopic instrument. When used in conjunction with the attitude indicator it provides:

A- rate of turn about the yaw axis

Q-1000: The outputs of a flux valve are initially sent to:

A- an error detector

Q -1001 The magnetic heading reference unit has a precession rate of:

B. $2^\circ/\text{min}$

Q-1002 Rate of turn is affected by:

i. aircraft speed ii. angle of bank iii. aircraft weight

A. i ii

Q-1003 If the TAS at 40000 ft is 450 kt the Mach No. is:

B. 0.784

Q-1004 What would the compass heading be given a true heading of 247° in an area where the variation is 8°W and a compass deviation of

B. 244

Q-1005 In which of the following modes may information from the AWR be displayed?

C. ii iii vi viii ix

Q-1006 The ability of a gyroscope to indicate aircraft heading is based on it having:

A. One degree of freedom in the vertical axis

Q-1007 An aircraft in the northern hemisphere lands and decelerates on a westerly heading. The compass will indicate:

D. A turn south

Q-1008 The EADI and the EHSI of an EFIS installation are also referred to by the manufacturers as:

A. The primary display and navigation display respectively

Q-1009 The output of a double integration N/S is:

C. Distance

Q-1010 The local speed of sound at mean sea level at ISA - 10°C is:

B. 650

Q-1011 The angle formed between the directive force and the total magnetic force is called:

C dip

Q-1012 Sound is propagated at a velocity which is dependent upon:

D. Temperature

Q-1013 If a constant CAS is maintained under normal conditions in the climb what happens to the Mach No.?

D. It will increase

Q-1014 A VMO/MMO alerting system contains a barometric aneroid capsule:

D. • which is subjected to static pressure and an airspeed capsule which is subjected to dynamic pressure

Q-1015 What is the speed of sound at 30000 ft and -40°C?

B.595

Q-1016 An aircraft is flying at flight level 350 at a CAS of 290 kt and a temperature deviation of ISA -10°C. The TAS and MN will be:

C. TAS 481kt Mach 0.855

Q-1017 Regarding magnetism, which of the following statements is correct?

i. Lines of flux run from blue pole to red pole ii. Like poles repel iii. Unlike poles repel iv. Like poles attract

v. Unlike poles attract

C. ii v

Q-1018 A solid state gyro is:

B. Rate sensor

Q-1019 A compass swing is used to:

A. Align compass north with magnetic north

Q-1020 When measuring different pressures (low/med/high) which of the following has the three types of sensing devices in ascending

order of pressure measurement?

- i. Bourdon tube
- ii. Bellows type
- iii. Aneroid capsule

A. iii ii i

Q-1021: on a standard 2-dot EHSI in the en route mode each dot represents:

A- 2 NM

Q-1022: An aircraft is descending at a constant Mach number. If the aircraft is descending through an inversion layer, the CAS will:

A- Increase

Q-1023: In an inertial-lead VSI the source of the most pronounced error is:

A- steep turn

Q-1024: The combined Machmeter/ASI is subject to the following errors:

A- position, density, instrument, compressibility, manoeuvre induced

Q-1025: An aircraft maintaining a constant CAS and altitude is flying from a cold airmass into warmer air. The effect of the change of temperature on the speed will be:

A- TAS will increase

Q-1026: An aircraft taking off from an airfield with QNH set in the altimeter has both static vents blocked by ice. As the aircraft climbs away the altimeter will:

A- read the airfield elevation

Q-1027: The gravity erecting device on a vertical gyro is used on which instrument?

A- Artificial horizon

Q-1028: In the ILS mode, one dot on the lateral deviation scale on the EHSI indicates:

A- 1 °

Q-1029: Wind information can be displayed in an EFIS system in which of the following modes?

A- full nav full ILS map centre map

Q-1030: Which of the following will affect a direct reading compass?

1. ferrous metals
2. non-ferrous metals
3. electrical equipment

A- 1&3

Q-1031: If an aircraft, fitted with a DRMC, takes off on a westerly heading, in the northern hemisphere, the DRMC will indicate:

A- a turn to the north

Q-1032: The rigidity (gyroscopic interia) of a gyroscope may be increased by:

A- increasing the speed of rotation and increasing the mass of the rotor

Q-1033: Given the following information calculate the instrument error of a preflight altimeter check:

- i. aerodrome elevation: 235 ft
- ii. apron elevation: 225 ft
- iii height of altimeter above apron: 20 ft
- iv. altimeter reading with QFE set: 40 ft

A- (+30ft)

Q-1034: A factor giving an error on a direct indicating compass would be:

A- acceleration on east/west headings

Q-1035: VLO is defined as:

A- The maximum speed at which the landing gear may be retracted or extended

Q-1036: You are flying at a constant FL290 and constant Mach number. The total temperature increases by 5°. The CAS will:

A- remain approximately constant

Q-1037: On an EADI radio altitude is displayed:

A- digitally between 2500 ft and 1000 ft and thereafter as an analogue/digital display

Q-1038: To improve the horizontality of a compass, the magnet assembly is suspended from a point:

A- above centre of gravity

Q-1039: In FMS fitted aircraft the main interface between pilot and system will be provided by:

A- the multi-purpose control and display unit

Q-1040: Select the correct statement:

A- EAS = CAS corrected for compressibility error

Q - The amber ALERT sign on an INS control and display unit:

A. illuminates steadily for 2 minutes before reaching the next Waypoint

Q- What are the advantages of an IRS compared to an INS?

A. Reduce spin-up time and accuracy not adversely affect by "g"

Q- Which of the following is the FMS normal operating condition in the cruise?

A. LNAV and VNAV

Q- at 200 fr on an autoland:

the LOC mode is engaged in the roll channel and the G/S modA is engaged in pitch.

Q-An autopilot delivers roll commands to the ailerons to achieve a bank angle:

A. proportional to the deviation from the destred heading, but not exceeding a specified maximum

Q-In a Schuler tuned INS, the largest unbounded errors are:

A. Due to the real wander of the platform gyroscopes

Q-To obtain heading information from a gyro stabilized platform, the gyros should have:

A. 1 degree of freedom and a horizontal axis

Q-Where an alternate static source is fitted, use of this source usually leads to:

A. An increase in the position error

Q- During an autoland the caption LAND 2 is illuminated. The system is:

A. Fail passive

Q- With reference to the flux valve of a remote indicating compass:

A. the flux valve is fixed to the aircraft and so turns with the aircraft to measure the angle between the aircraft and the earth's magnetic field

Q- Weather radar returns can be displayed in which of the following EFIS Modes?

A. Map Exp ILS Exp VOR

Q-During a CAT 1 ILS approach, height is indicated by:

A. Barometric

Q-WXR display is in

A. On both captain's and co-pilot's

Q- Altitude select and altitude hold are examples of:

A. manometric functions from the Air Data Computer

Q- If only a single A/P is used to climb, cruise and approach, following a failure:

A.it is fail-safe and will disconnect

Q- What errors can the Air Data Computer correct for?

A. 2&4

Q- If the RPM of the rotor in a turn and slip indicator is higher than normal, the turn indicator will:

A. Over-read the correct rate of turn

Q- "Loc Armed" lights up on the FMA part of the PFD , this means:

A. Localizer beam armed and awaiting capture

Q-What are the colours used on an EFIS display to show a tuned navigation aid and an airport?

A. Green & Cyan

Q-During an approach to autoland at 1500 feet:

A. Localizer is controlling the roll channel, off line channels are automatically engaged and flare mode is armed

61.When does the engine High Pressure fuel shut off valve close?

A. When the engine fuel switch is selected off during engine shutdown

62.Which part of the gas turbine engine limits the temperature?

A. Turbine

63.The EGT indication on a piston engine is used:

A.to assist the pilot to adjust the fuel mixture

64.A gas turbine engine having a single spool, the compressor will rotate:

A. at the same speed as the turbine

65.The fuel cross-feed valves are fitted in order to facilitate:

A.the use of fuel from any tank to any engine

66.What colour is the hydraulic liquid in a modern jet airliner?

A. Purple

67.What does "octane rating" when applied to AVGAS refer to?

A.The anti-knock value of the fuel

68.What frequency is commonly used in aircraft electrical distribution systems?

A.400 Hz

69.An axial flow compressor when compared to a centrifugal compressor:

A.takes in more air and is more prone to rupturing

70.In an aircraft with a fuel dumping system it will allow fuel to be dumped:

A.down to a predetermined safe value

71.What makes the non-rigid fittings of compressor and turbine blades rigid when the engine is running?

A. Aerodynamic and centrifugal force

72.What ice protection system is used on most modern jet transport aircraft?

A. Hot air

73.When does the Low-Pressure fuel shut off valve close?

A.When the fire handle is pulled

74.What is the purpose of the torque links in a landing gear leg?

A.To prevent the wheel rotating around the leg

75.When smoke appears in the cockpit, after donning the oxygen mask the pilot should select:

A.emergency

76.What voltage is supplied to booster pumps on a modern jet airliner?

A.200 V AC three phase

77.Where are smoke detectors fitted?

A. Toilets and cargo compartments B,C,E

78.Hydraulic pressure typically used in the system of large transport aircraft is:

A. **3000-4000** psi

79.An artificial feel system is needed in the pitch channel if the:

A. elevators are controlled through an irreversible servo system

80.Auto brakes are disengaged:

A.by the pilot

81.The engine fire extinguisher system is activated:

A.by the pilot when required

82.What limits the max. temperature in a gas turbine engine?

A.Temperature at the turbine

83.On what principle does a fuel flowmeter work?

A.Quantity of movement

84.In a stressed skin aircraft, bending loads acting on the wings are taken by:

A.spars and skin

85.What is the coefficient of friction on an aquaplaning (hydroplaning) tyre?

A.0

86.Hydraulic fluid:

A.is harmful to eyes and skin, and is also a fire hazard

87.Emergency oxygen is provided by:

A.two independent systems, one for flight deck, one for cabin

88.What is the purpose of a surge box inside a fuel tank?

A.Prevent sloshing of fuel away from pump inlet during abnormal manoeuvres

89.The function of stringers in the construction of the fuselage is:

A.to provide support for the skin and to absorb some of the pressurization strain as tensile loading

90.An unpressurized aircraft is flying above FL100 and therefore must have sufficient oxygen for:

A.both pilots immediately and the cabin crew plus some passengers after 30 minutes above FL100 but below FL130.

91.What is a ram air turbine (RAT) which drives a hydraulic pump used for?

A.Flight controls in case of failure of the engine driven system

92.As altitude increases what does the mixture control do to the fuel flow?

A.Reduces flow due to reduced air density.

93.On what principle does the fuel contents gauging system work on a modern large aircraft?

A.Changes in dielectric causes changes in capacitance

94.What is the purpose of the diluter demand valve in the emergency oxygen system?

A.To dilute oxygen with air in crew oxygen system

95.The requirement for an aircraft to have a fuel dumping system is:

A.aircraft whose maximum landing mass (MLM) is significantly lower than its maximum take-off mass (MTOM)

96.In a non-stressed skin aircraft, bending loads acting on the wings are taken by:

A.spars

97.At what height is it mandatory for one of the flight deck crew to wear an oxygen mask?

A.41000 ft

98.Why, in the bootstrap system, is the air compressed before it enters the heat exchanger?

A.To ensure maximum pressure and temperature drop across the turbine

99.Aircraft above a certain capacity must carry a crash axe, it is provided to:

A.enable access behind panels and soundproofing to aid fire fighting

100.What is engine pressure ratio?

A.The ratio of turbine outlet pressure to compressor inlet pressure

Q-1201: On a Lambert's chart the constant of the cone is 0.80. A is at 53N 04W. You plan to fly to B. The initial Lambert's chart straight-line track is 070(T) and the rhumb line track from A to B is 080(T). What is the longitude of B?

A-1201: 021E

Q-1202: The distance A to B is 90 NM in a straight line. You are 60 NM from A when you fix your position 4 NM to the left of track. What correction do you need to make to arrive at B?

A-1202: 12°

Q-1203: An aircraft is flying at FL.200, the OAT is 0°C. When the actual air pressure on an airfield at MSL is placed on the subscale of the indicated altitude is 19300 ft. What is the aircraft's True Altitude?

A-1203: 21300ft

Q-1204: Given the following: True track: 192° Magnetic variation: 7°E Drift angle: 5° left What is the magnetic heading required to maintain the

A-1204: 190°

Q-1205: On 27 Feb at 52°S 040°E Sunrise is at 0243UTC. On the same day at 52°S 035°W the time of Sunrise is:

A-1205: 0743 UTC

Q-1206: At 0422 you are 185 NM from a VOR at FL370. You need to descend at a mean descent rate of 1800'/min to be at FL80 overhead the VOR. Your ground speed in the level cruise is currently 320 knots. In the descent your mean G/S will be 232 knots. What is the latest time to commence descent?

A-1206: 0445

Q-1207: What is the diameter of the Earth?

A-1207: 12732 km

Q-1208: The angle between the true great circle track and the true rhumb line track joining the following points: A (60S 165W) and B (60S place of departure A, is:

A-1208: 7.8°

Q-1209: An aircraft is cruising at FL350, Temp -50°C and is told to descend to FL80, Temp -10°C. If the IAS for the descent was 188 kt, what would be the appropriate TAS?

A-1209: 260kt

Q-1210: The distance between two waypoints is 200 NM. To calculate compass heading the pilot used 2°E magnetic variation instead that the forecast W/V applied, what will the off track distance be at the second waypoint?

A-1210: 14NM

Q-1211: Given: True course 300° Drift 8°R Variation 10°W Deviation -4° Calculate the compass heading.

A-1211: 306°

Q-1212: Given the following: Magnetic heading: 060° Magnetic variation: 8°W Drift angle: 4° right What is the true track?

A-1212: 056°

Q-1213: Given: Position A is 60N 020W, Position B is 60N 021W, and Position C is 59N 020W, what are, respectively, the distance A to C?

A-1213: 30 NM and 60 NM

Q-1214: How many nautical miles are travelled in 1 minute 45 seconds at a ground speed of 135 knots?

A-1214: 3.94

Q-1215: The rhumb line distance between points A (60°00'N 002°30'E) and B (60°00'N 007°30'W) is:

A-1215: 300NM

Q-1216: The sensitivity of a direct reading magnetic compass is:

A-1216: proportional to the horizontal component of the Earth's magnetic field

Q-1217: On a Lambert chart, the convergence factor is 78585. What is the parallel of tangency?

A-1217: 51°48'

Q-1218: Given: A Polar Stereographic chart whose grid is aligned with the zero meridian. Grid track 344', longitude 115°00'W, cal (Assume N hemisphere).

A-1218: 229°

Q-1219: Given: True track 180° Drift 8°R Compass Heading 195° Deviation -2° Calculate the variation.

A-1219: 21°W

Q-1220: An aircraft has to climb from FL50 - 10°C to FL260 -25°C. The IAS for the climb is 180 kt and the WC is +30 kt. If the ROC is 900 ft/min, how many miles will the climb take?

A-1220: 106 NM

Q-1221: According to EASA Part-FCL, an applicant for a CPL (A) who has satisfactorily followed and completed an integrated flying training course shall have completed as a pilot of aeroplanes having a certificate of airworthiness issued or accepted by an EASA Member State at least

A-1221: 150 hours of flight time

Q-1222: ATIS broadcasts contain cloud details whenever the:

A-1222: Cloud base is below 5000 ft or the highest MSA (whichever is the higher)

Q-1223: Unaccompanied baggage carried by air shall be cleared under a procedure applicable to:

A-1223: accompanied baggage or under a simplified customs procedure similar to other cargo.

Q-1224: When a State renders valid a licence issued by another Contracting State, as an alternative to issuance of its own licence, the validity shall

A-1224: not extend beyond the period of validity of the licence.

Q-1225: According to EASA Part-FL, the privileges of the holder of an unrestricted FI(A) rating are to conduct flight instruction for the issue of a CPLA

A-1225: provided that the FI(A) has completed at least 500 hours of flight time as a pilot of aeroplanes including at least 200 hours of flight instruction.

Q-1226: What is required if a stop bar is not provided at a runway entrance and the runway is to be used with RVR of less than 550 m

A-1226: Runway guard lights.

Q-1227: A contracting state which continues to require the presentation of a cargo manifest shall, apart from the information indicated in the heading or format of the cargo manifest, not require more than the following items:

A-1227: airway bill number, the number of packages and the nature of goods.

Q-1228: The State of registration is:

A-1228: The State where the aircraft is currently registered

Q-1229: Contracting states shall carry out the handling, forwarding and clearance of airmail and shall comply with the documentary procedures as prescribed by:

A-1229: the Acts in force of the Universal Postal Union.

Q-1230: Independent parallel approaches may be conducted to parallel runways provided that an NTZ (non transgression zone) of at least:

A-1230: 610 m wide is established between extended centre lines.

Q-1231: An area symmetrical about the extended runway centre line and adjacent to the end of the strip, primarily intended to reduce the risk of damage to an aircraft undershooting or overrunning the runway is defined as a:

A-1231: runway end safety area.

Q-1232: According to EASA Part-FCL, recognized instructor categories are:

A-1232: FI(A), TRI(A), CRI(A), IRI(A), MCCIA and SFI(A) only.

Q-1233: According to Annex 7, the registration mark shall be letters, numbers or a combination of letters and numbers and shall be that assigned by:

A-1233: the State of Registry or Common Mark Registering Authority.

Q-1234: For an instrument runway, how far from the centre line of the runway is a "runway vacated" sign positioned?

A-1234: At the end of the ILS/MLS Sensitive Area.

Q-1235: Where in the AIP would you find details on instrument holding procedures?

A-1235: ENR

Q-1236: What action should be taken if contact is lost with the runway during a circling approach?

A-1236: Initiate a missed approach.

Q-1237: The International Civil Aviation Organization (ICAO) establishes:

A-1237: standards and recommended international practices for contracting member states.

Q-1238: In the event of a delay of a controlled flight, the flight plan shall be amended or cancelled and a new flight plan submitted should that delay be in excess of:

A-1238: 30 mins of estimated off-blocks time (EOBT)

Q-1239: A separation minima shall be applied between a light or medium aircraft and a heavy and between a light and a medium aircraft when the heavier aircraft is making a low or missed approach and the lighter aircraft is utilizing an opposite direction runway on a parallel runway separated by:

A-1239: A separation minima shall be applied between a light or medium aircraft and a heavy and between a light and a medium aircraft when the heavier aircraft is making a low or missed approach and the lighter aircraft is utilizing an opposite direction runway on a parallel runway separated by:

Q-1240: When an aircraft subjected to unlawful interference has landed in a Contracting State, it shall notify by the most expeditious means the State of Registry and the State of the Operator of the landing and, in addition, shall similarly transmit all other relevant information to:

A-1240: each State whose citizens suffered fatalities or injuries, each State whose citizens were detained as hostages, each State whose citizens were known to be on board and ICAO.

Q-1241: An RNP1 route designated as A342Z, indicates that the route is at or below FL190 and all turns shall be made within the allowable RNP tolerance of a tangential arc between the straight leg segments with a radius of:

A-1241: 15 NM for turns between 30° and 90°

Q-1242: A check list of AIP Supplements is published:

A-1242: monthly

Q-1243: The operator is responsible for the custody and care of the passengers. This responsibility shall terminate

A-1243: from the moment they have been admitted into the destination State

Q-1244: What is the width of a code letter D taxiway used by aircraft with an outer gear wheel span of more than 9 m ?

A-1244: 23 m

Q-1245: What is the minimum width of a code 4 runway?

A-1245: 45 m

Q-1246: A TODA consists of:

A-1246: the take-off run available including the clearway.

Q-1247: Temporary changes of long duration (3 months or more) and information of short duration which contains extensive graphics and/or text are published as AIP Supplements. Check lists of these Supplements which are in force are sent to recipients at intervals of not more than:

A-1247: one month

Q-1248: ATIS will only broadcast cloud base information when the cloud base is:

A-1248: 5000ft

Q-1249: What is the meaning of the signal LLL from search parties?

A-1249: operation completed

Q-1250: The continued validity of a C of A (certificate of airworthiness) of an aircraft is subject to the laws of:

A-1250: the State of Registration.

Q-1251: Voice ATIS:

1. cannot be broadcast on a voice ILS
2. cannot be broadcast on voice VOR
3. is broadcast only on a discreet VHF frequency

4. is broadcast on either a discreet VHF, VOR or an ILS frequency

A-1251: 1 only is correct.

Q-1252: If no ICAO identifier has been attributed to an aerodrome, what should be entered in Box 16 of the Flight Plan?

A-1252: ZZZZ

Q-1253: Which International Agreement relates to Penal Law?

A-1253: tokyo

Q-1254: Fixed distance markers, when provided, shall commence:

A-1254: 300 metres from the far end threshold

Q-1255: If an aircraft is radar vectored to intercept an ILS localizer, what is the maximum intercept angle?

A-1255: 45°

Q-1256: Which of the following is not a valid SSR mode A squawk?

A-1256: A5678

Q-1257: What are the objectives of ATC Services?

A-1257: To prevent collisions between aircraft, to prevent collisions between aircraft on the manoeuvring area and obstructions on that area and to expedite and maintain an orderly flow of air traffic.

Q-1258: An RNP1 route designated as A342Y, indicates that the route is at or above FL200 and all turns shall be made within the allowable RNP tolerance of a tangential arc between the straight leg segments with a radius of:

A-1258: 22.5 NM for turns between 30° and 90°

Q-1259: A Type Rating is applicable to:

A-1259: an aircraft that requires multi-pilot operation.

Q-1260: A heavy aircraft makes a missed approach on a parallel runway in the opposite direction. A light aircraft has a wake turbulence separation of 2 minutes. This wake turbulence separation will apply when the parallel runways are:

A-1260: less than 760 m apart.

Q-1261: The VMC minima for a VFR flight within ATS airspace class B are:

A-1261: 8 km visibility at or above 3050 m AMSL, 1500 m horizontal and 300 m vertical clear of cloud

Q-1262: Lights on an airfield or in the vicinity can be extinguished if they can be re-lit:

A-1262: at least 60 minutes before the ETA of the aircraft.

Q-1263: What is the length of the approach lighting system of a Cat II precision landing runway?

A-1263: 900m

Q-1264: The minimum number of rescue and fire fighting vehicles required for a Cat 8 Aerodrome is:

A-1264: 3

Q-1265: A marshaller crosses his/her hands in front of the face, palms outwards and then moves the arms outwards. What does this signal indicate?

A-1265: remove chocks

Q-1266: When independent parallel approaches are used on parallel runways and headings (vectors) are given to intercept the ILS, the given heading must be such that the aeroplane can establish on the localizer course or the MLS final approach track in level flight over at least:

A-1266: 2.0 NM before the ILS glide slope or the specified MLS elevation angle is intercepted

Q-1267: a PAPI must consist of:

A-1267: a row of 4 multiple lights or paired units without transition zone, at equal distance from each other.

Q-1268: The minimum response time for the aerodrome rescue and fire fighting services to the end of each runway as well as to any other part of the movement area is

A-1268: 2 minutes and not exceeding 3 minutes.

Q-1269: Lights at the end of the runway shall be:

A-1269: steady unidirectional lights radiating red light in the direction of the runway.

Q-1270: According to international agreements the wind direction must be given in degrees magnetic converted with local magnetic variation from the true wind direction:

A-1270: before landing and taxi for take-off.

Q-1271: A fixed obstacle that extends above a take-off climb surface within.....shall be marked and, if the runway is to be used at night, must be lit.

A-1271: 3000 ft

Q-1272: Repetitive flight plans (RPLs) cannot be used for flights other than those executed frequently on the same days of following weeks and:

A-1272: for at least 10 occasions or every day over a period of at least 10 consecutive days.

Q-1273: When the captain cannot comply with an ATC clearance:

A-1273: he/she may request an amended clearance and, if executable, he/she will accept that clearance.

Q-1274: An aircraft is allowed to descend below the MSA if:

A-1274: all of the above

Q-1275: An aircraft is maintaining FL150 in Class C Airspace. Another aircraft below at FL140 receives a clearance to descend to FL70 due to turbulence in the area. When at earliest can a clearance be expected to descend to FL140 or lower?

A-1275: When the other aircraft has reported to be descending through FL130.

Q-1276: what is the separation that must be maintained before intercepting the ILS on an independent parallel approach?

A-1276: 1000 ft

Q-1277: The longitudinal separation minimum based on time between aircraft at the same FL, where there is enough coverage for navigation aids and the preceding aircraft has a higher true airspeed of 20 kt minimum is:

A-1277: 5 minutes

Q-1278: The transition from IFR to VFR is done:

A-1278: on the Captain's initiative.

Q-1279: What is required for an IFR flight in advisory airspace?

A-1279: Flight plan required and PIC must notify of any changes regardless if wanting advisory service or not.

Q-1280: Air Traffic Service unit consists of:

A-1280: Air Traffic Control Units, Flight Information Centres and Air Traffic Services Reporting

offices.

Q-1281: transition level:

A-1281: will be calculated by the ATC service of an ATS unit.

Q-1282: Concerning aircraft registration markings, no combinations can be used if they can be mistaken for:

A-1282: 5 letter combinations which are used by international code of signals.

Q-1283: What is the rule concerning level or height the aircraft should maintain when flying IFR outside controlled airspace unless otherwise directed?

A-1283: 1000 ft above the highest obstacle within 8 km of the estimated position of the aircraft.

Q-1284: It is permitted in a particular sector, if there is a conspicuous obstacle in the visual manoeuvring area outside the final and missed approach areas, to disregard that obstacle. When using this option, the published procedure shall be:

A-1284: forbid a circling approach in the entire sector in which the obstacle is located.

Q-1285: The transition from altitude to flight level and visa versa is made:

A-1285: at the transition altitude in the climb and transition level in the descent

Q-1286: Temporary changes of long duration in specifications for AIP supplements and information of short duration, which contains extensive text and / or graphical representation, has to be published as AIP supplements. Long duration is considered to be:

A-1286: 3 months or longer.

Q-1287: An aircraft is expected to overtake another aircraft if it is closing from behind in a sector of:

A-1287: 70° both sides of the longitudinal axis.

Q-1288: An aircraft flies over mountainous terrain at which a search and rescue operation is conducted to find survivors of a plane crash. The pilot see: ground sign in the form of an "X". This indicates:

A-1288: require medical assistance.

Q-1289: A clearway is a squared area that is established to:

A-1289: enable the aircraft to make a part of the initial climb to a specified altitude.

Q-1290: An aircraft which is not concerned with regular international flights and which makes a flight to or via a dedicated aerodrome of a member State and is temporarily free of taxes is admitted and will stay within that State without paying customs:

A-1290: during a period which is determined by the State.

Q-1291: If the track on an instrument departure is published, the pilot is expected to:

A-1291: correct for the known wind so as to maintain the published track

Q-1292: A manoeuvre where a turn is made from a "designated track" followed by a turn in the opposite direction to enable the aircraft to fly the prescribed track is called a:

A-1292: procedure turn

Q-1293: The person having overall responsibility of an aircraft during flight is the:

A-1293: pilot-in-command.

Q-1294: Close to an aerodrome that will be used for landing by aircraft, the vertical position shall be expressed as:

A-1294: altitude above sea level at or below transition altitude.

Q-1295: How many red lights have to be seen by the pilot, whose aircraft on final approach follows a normal PAPI defined glide-path?

A-1295: 2

Q-1296: Aircraft A flies in VMC with an ATC clearance within a control area. Aircraft B without ATC clearance approaches at roughly the same height on a converging heading. Who has right of way?

A-1296: Aircraft B, if A is to the left of him.

Q-1297: Pilots are not allowed to use the ident function on their SSR, unless:

A-1297: if asked by ATC.

Q-1298: A controlled flight is required to inform the concerned ATC unit when the average TAS at cruising level deviates or is expected to deviate compared to that given TAS in the Flight Plan by at least plus or minus:

A-1298: 5%

Q-1299: It says in the annex of the ICAO convention that the sizes of airfields are specified by codes for different runways. What is the minimum width of a runway with runway code 4?

A-1299: 45 m

Q-1300: It says in the annex of the ICAO convention that the sizes of airfields are specified by codes for different runways. What is the minimum width of a runway with runway code 4?

A-1300: 45 m

Q-1301: When someone's admittance to a country is refused and he/she is brought back to the operator for transportation away from the territory of the state:

A-1301: the operator will not be prevented from taking any transport costs from a person which arises out of his/her inadmissibility.

Q-1302: When given instructions to set a mode/code, a pilot shall:

A-1302: read back mode and code.

Q-1302: An aircraft, on a radar approach, should be told to consider making a missed approach when the aircraft is not visible on the radar screen for significant period of time and when it is within:

A-1302: the last 2 NM of the approach.

Q-1303: What action should be taken when, during an IFR flight in VMC, you suffer a radio failure?

A-1303: Continue flying in VMC and land as soon as possible.

Q-1304: An ATS airspace, in which IFR and VFR flights are permitted and all flights receive air traffic control service, IFR flights are separated from other IFR flights and receive traffic information concerning VFR flights and VFR flights receive traffic information concerning all other flights, is classified as

A-1304: Airspace D

Q-1305: Who is responsible for the safety of an AT clearance concerning terrain clearance?

A-1305: The Captain

Q-1306: When requesting to engage the parking brake, a marshaller will give the following signal:

A-1306: raise arm and hand with fingers extended horizontally in front of the body. Then clench fist.

Q-1307: ICAO Annex 17 lays down the rules to establish security measures for passengers with regard to:

A-1307: cabin baggage, checked baggage, cargo and other goods, access control and airport design.

Q-1308: For a controlled flight before departure, a flight plan must be filed at least:

A-1308: 60 minutes before departure.

Q-1309: What does DER mean?

A-1309: departure end of runway.

Q-1310: Concerning the three entries to the hold, the entry has to be flown on:

A-1310: heading

Q-1311: in aircraft making an approach must be told to make a missed approach, when no landing clearance has been received from the non-radar controller, when the aircraft is at a distance of:

A-1311: 2 NM from the touchdown.

Q-1312: Except when cleared by an ATC unit, a VFR flight cannot enter or leave a Control Zone when the cloud base is lower than:

A-1312: 1500 ft or less than 5 km visibility.

Q-1313: Who has the final authority as to the disposition of the aircraft?

A-1313: The Commander.

Q-1314: In Mode 2 Parallel Runway operations, a minimum radar separation can be provided of:

A-1314: 3 NM between aircraft on the same localizer course.

Q-1315: The speed limit (IAS) in airspace E is:

A-1315: 250 kt for IFR and VFR, below FL100.

Q-1316: clocks and other timing equipment used by air traffic services must be checked in order to be able to give the time within plus or minus:

A-1316: 30 seconds of UTC.

Q-1317: In an instrument approach procedure, the segment where the aircraft is lined up with the runway centre line and when the decent is commenced called:

A-1317: final approach segment.

Q-1318: In order to satisfy lateral track separation between aircraft using the same fix and Dead Reckoning, the aircraft:

A-1318: have to fly 45° separated at a distance of 15 NM or more from the fix.

Q-1319: Except in special cases, the establishment of change-over points shall be limited to route segments of:

A-1319: 60 NM or more.

Q-1320: When doing a procedure turn (45%180°) going outbound turned 45° off track, the time taken from the beginning of the turn for Cat A and Cat B aircraft is:

A-1320: 1 minute