AVQUIZ

FLYING OPS

1. **The costs of a private flight may be shared amongst all persons on the flight provided that the costs are equally shared, the crew do not receive any payment for their services and the number of**

   (a) passengers on board does not exceed six.

   (b) persons on board does not exceed six.

   (c) passengers on board does not exceed four.

   (d) persons on board does not exceed four.

2. **An appropriately certified and equipped aircraft registered '24-xxxx' under the Recreational Aviation Association of Australia, Inc. may operate from a GAAP aerodrome**

   (a) under no circumstances.

   (b) only under a CASA legal instrument specific to the pilot and aircraft.

   (c) only if of a type that has been certified to FAR 23.

   (d) provided the pilot is appropriately qualified, and a serviceable radio is carried.

3. **DME distance is the**

   (a) slant distance to the aid whereas GNSS distance is given from the aerodrome reference point.

   (b) slant distance to the aid as is GNSS distance.

   (c) distance to the aerodrome reference point as is GNSS distance.

   (d) slant distance to the aerodrome reference point.

4. **Taxiway mandatory instructions use**

   (a) white letters on a red background and may be passed at the discretion of the pilot.

   (b) white letters on a red background and must not be passed without a clearance to do so.

   (c) black letters on a yellow background and must not be passed without a clearance to do so.

   (d) yellow letters on a black background and must not be passed without a clearance to do so.

5. **In the case of a generator failure on a piston-engine aircraft, the engine will**

   (a) eventually fail due to lowering battery bus voltage.

   (b) fail within a very short time due to falling bus voltage.

   (c) not fail as a result of ignition failure since magnetos are independent.

   (d) not fail as the battery capacity is more that sufficient to power the magnetos for a time in excess of the endurance.

6. **When flight planning at an average fuel burn of 30 litres per hour, in an aircraft with a fuel tank capacity of 190 litres total and 180 litres usable, the endurance would be**

   (a) 380 minutes which would be entered in NAIPS as 0380.

   (b) 380 minutes which would be entered in NAIPS as 0620.

   (c) 360 minutes which would be entered in a NAPIS as 0360.

   (d) 360 minutes which would be entered in a NAIPS as 0600.

7. **Assuming that all other factors remain the same, the indicated stalling speed**

   (a) does not change with increasing altitude, but the corresponding true airspeed increases.

   (b) does not change with increasing altitude, but the corresponding true airspeed decreases.

   (c) decreases with increasing altitude.

   (d) increases with increasing altitude.

8. **If an ELT is inadvertently activated for more than**

   (a) 5 seconds, SAR should be contacted on 1800 815 257.

   (b) 5 seconds, CENSAR should be contacted on 1800 814 931.

   (c) 10 seconds SAR should be contacted on 1800 815 257.

   (d) 10 seconds CENSAR should be contacted on 1800 814 931.

9. **When receiving a NAIPS specific pre-flight information bulletin (SPFIB) by describing the route as 'direct' (DCT), FIR NOTAMs are**

   (a) automatically included.

   (b) automatically included for a 100nm radius of the departure and destination points.

   (c) not automatically included but may be obtained by adding 7 before and 0 after the two-digit ARFOR code e.g. 7400

   (d) not automatically included and cannot be obtained with DCT.

10. **When receiving an SPFIB via NAIPS after describing the route as 'direct' (DCT), NOTAM information on prohibited, restricted and danger areas (PRD) will be given for 50nm radius of the departure and destination points**

    (a) except where these points are entered as latitude and longitude.

    (b) in all cases.

    (c) and 10nm either side of the direct track.

    (d) and 50nm either side of the direct track.

MAINTENANCE

1. **In accordance with AC 43.13-1A, the allowable voltage drop on an electrical circuit between the generator and bus is:**

   (a) 0.5 volts for a 14 volt system.

   (b) 2% or 0.5 volts which ever is the greatest.

   (c) 2% or 1 volt which ever is the greatest.

   (d) 2% when the generator is delivering rated current.

2. **A 'shower of sparks' ignition system on a piston-engine aircraft:**

   (a) uses battery power to produce a higher energy spark for starting.

   (b) uses battery power to provide a higher energy and advanced spark for starting and for high power settings.

   (c) produces retarded and prolonged spark, independent of the electrical system, for starting.

   (d) produces an advanced series of sparks for starting.

3. **A yaw damper increases:**

   (a) lateral stability by reacting to the amount of movement around the lateral axis.

   (b) lateral stability by reacting to the rate of movement around the lateral axis.

   (c) directional stability by reacting to the amount of movement around the normal axis.

   (d) directional stability by reacting to rate of movement around the normal axis.

4. **Compared to battery discharge at the five minute rate, the capacity of a battery discharged at the 10 hour rate would be:**

   (a) less, and is expressed in amp.-hours.

   (b) greater, and is expressed in amp.-hours.

   (c) less, and is expressed in amps.

   (d) greater, and is expressed in amps.

5. **As the operating pressure of a hydraulic system increases the allowable**

   (a) maximum bend radius of a hose increases.

   (b) maximum bend radius of a hose decreases.

   (c) minimum bend radius of a hose increases.

   (d) minimum bend radius of a hose decreases.

6. **An o-ring application where an o-ring relies primarily on its resiliency to accomplish a seal would be**

   (a) under a screw cap.

   (b) on a moving piston in a brake master cylinder.

   (c) on the outside of a fitting through a pressure bulkhead under a packing nut.

   (d) between two halves of a fuel pump housing.

7. **The flare angle on an aviation tube using AN-818 nut and AN-819 (MS20819) sleeve is**

   (a) 37 degrees not the 45 degree used in automotive applications.

   (b) 45 degrees not the 37 degree used in automotive applications.

   (c) 37 degrees total included angle.

   (d) 45 degrees total included angle.

8. **Without alignment correction, a gimballed gyroscope such as the vertical gyro used in an attitude indicator, would appear to be inverted**

   (a) after 24 hours if situated at the equator.

   (b) after 12 hours if situated at the equator.

   (c) after 24 hours if situated at a pole.

   (d) after 12 hours if situated at a pole.

9. **An ARINC 429 bus is**

   (a) the industry standard for DC power.

   (b) the industry standard for AC power.

   (c) a data bus that feeds multiple systems connected to it.

   (d) a data bus used exclusively for providing data to a flight data recorder (FDR).

10. **When rolling the wings level after a turn, a radio altimeter will provide an input to a ground proximity warning system (GPWS)**

    (a) indicating that closure rate on terrain is increasing.

    (b) indicating that closure rate on terrain is decreasing.

    (c) that is ignored above 500 ft.

    (d) that is ignored because it conflicts with the baro rate.

IFR OPERATIONS

FLIGHT INSTRUMENT REFRESHER

1. Which of the following correctly lists the gyroscopic instruments?

(a) Airspeed indicator (ASI.), altimeter, vertical speed indicator (VSI)

(b) ASI., VSI., artificial horizon (AH) or attitude indicator (AI), directional gyro (DG), turn coordinator

(c) AH or AI, DG, the turn portion of the turn coordinator

(d) A.H. or A.I., D.G., all of the turn coordinator

Two properties of a spinning gyroscope are 'rigidity in space' and 'gyroscopic precession'.

2. Which of the following gyroscopic instruments utilise 'rigidity in space' as the means of operation?

(a) AH or AI spinning around a vertical axis.

(b) AH or AI spinning around a horizontal axis.

(c) DG spinning around a horizontal axis.

(d) Turn coordinator spinning around a horizontal axis.

(e) Both (a) and (c) are correct.

3. Which of the following gyroscopic instruments utilise 'gyroscopic precession' as the means of operation?

(a) AH or AI, D.G. and turn coordinator.

(b) AH or AI, and DG only.

(c) DG only.

(d) Turn coordinator only, noting that the balance ball is not a gyroscopic part of the instrument.

4. Select from the following list the most common means by which the gyro instruments are powered in light aircraft?

(a) AH or AI, and DG are vacuum or suction driven, turn coordinator is electrically driven.

(b) AH or AI, D.G. and turn coordinator are all vacuum or suction driven.

(c) AH or AI, and D.G. are electrically driven, turn coordinator is suction driven.

(d) AH or AI, DG and turn coordinator are all electrically driven.

5. Which of the following correctly lists the pressure instruments that utilise both dynamic and static pressure?

(a) ASI, altimeter and VSI.

(b) ASI only.

(c) Altimeter and VSI. only.

(d) VSI only.

6. Which of the following correctly lists the pressure instruments that utilise static pressure only?

(a) ASI only.

(b) ASI, altimeter, and VSI.

(c) Altimeter and VSI.

(d) Altimeter only.

7. What is the accepted tolerance for an IFR operation that requires two altimeters?

(a) Both altimeters must be within 60 ft of the nominated elevation.

(b) Both altimeters must be within 75 ft of the elevation.

(c) One altimeter must be within 60 ft, the remaining altimeter must be within 100 ft.

(d) One altimeter must be within 60 ft, the remaining altimeter within 75 ft to the first point of landing (IFR) where a re-check may be done. On the re-check, the second altimeter to be within 60 ft.

8. You are flying a heading of 270° on the compass in the southern hemisphere. You now turn right, rate one, to a heading of 315° on the compass. What allowance, if any, would be needed to accurately roll out on the new heading?

(a) No allowance required, other than the normal lead angle for recovery onto 315°.

(b) 20° of overshoot required, that is 335°.

(c) 20° of undershoot required, that is 295°.

(d) 30° of undershoot required, that is 275°.

9. You are flying in cloud and encounter icing conditions. The pitot heat fails such that the pitot tube and drain hole block with ice. If you were to climb out of the icing conditions, what would you expect to see on the ASI?

(a) IAS will continually increase.

(b) I.A.S. will continually decrease

(c) I.A.S. will read zero

(d) I.A.S. will be unaffected

10. In flight, a single static source becomes blocked. What indications would be shown on the pressure instruments?

(a) ASI, altimeter, VSI will read zero.

(b) ASI will continue to read. IAS, altimeter and VSI will read zero.

(c) ASI will continue to read but over-read in a descent, altimeter remains constant and VSI read zero.

(d) ASI, altimeter, VSI will all under read the correct values when climbing or descending.