

AVQUIZ

FLYING OPS

- 1. In radio communications, a frequency of 118.125 MHz is pronounced as**
 - (a) 'one, one eight decimal one two'.
 - (b) 'one, one eight decimal one two five'.
 - (c) 'one, one eight one two'.
 - (d) 'one, one eight one two five'.
- 2. Pilot briefing via NAIPS can now be accessed**
 - (a) either via the internet or, if the software is installed, via a direct dial 0198 304 767.
 - (b) either via the internet, or via direct dial 0198 304 767 regardless of software.
 - (c) only via the internet at www.airservicesaustralia.com
 - (d) only via direct dial 0198 304 767.
- 3. When gliding, the flattest glide angle will be achieved at a speed corresponding to the**
 - (a) highest lift coefficient.
 - (b) highest lift-drag ratio.
 - (c) minimum drag.
 - (d) minimum rate of descent.
- 4. When climbing into wind compared to downwind, the rate of climb**
 - (a) and angle of climb both increase.
 - (b) decreases, but the angle of climb increases.
 - (c) remains the same, but the angle of climb is decreased.
 - (d) remains the same, but the angle of climb is increased.
- 5. In the new TAF format, the term FU VV030 means**
 - (a) smoke and a visibility of 3000 metres.
 - (b) smoke and a vertical visibility of 3000 ft.
 - (c) fumes and a visibility of 3000 metres.
 - (d) fumes and a vertical visibility of 3000 ft.
- 6. In a TAF, the term BECMG 0122/0202 means that a significant change is expected to occur**
 - (a) gradually between 2200Z on the 1st and 0200Z on the 2nd.
 - (b) rapidly between 2200Z on the 1st to 0202 Z on the 2nd.
 - (c) gradually between the four figure time groups 0122Z and 0202Z.
 - (d) rapidly between the four figure time groups 0122Z and 0202Z.
- 7. Loading an aircraft so that the centre of gravity is close to the rearward limit results in**
 - (a) a higher stall speed.
 - (b) a lower stall speed.
 - (c) no change in stall speed, but an increase in lateral stability.
 - (d) no change in stall speed, but a decrease in lateral stability.
- 8. In considering weight and balance of an aircraft, the datum is the**
 - (a) position of the centre of gravity when the aircraft is loaded.
 - (b) position of the centre of gravity of the empty aircraft.
 - (c) point from which the moment arms are measured.
 - (d) maximum forward point of the centre of gravity.
- 9. DECTALK is an automated MET briefing service via a phone, whereas METBRIEF is**
 - (a) the alternative to DECTALK when accessed via NAIPS.
 - (b) an upgrade of DECTALK with no changes to access.
 - (c) the replacement for DECTALK, which has been decommissioned.
 - (d) an upgrade of DECTALK which requires an account number and password, registration with NAIPS and a PhoneAway card.
- 10. A new standard for VHF radios requiring a higher frequency stability will be introduced from November,**
 - (a) 2009, and no radios with 100MHz channel spacing and only some radios with 50MHz spacing will be approved.
 - (b) 2009, and no radios with 50 or 100 MHz channel spacing will be approved.
 - (c) 2010, and no radios with 100MHz channel spacing and only some radios with 50MHz spacing will be approved.
 - (d) 2010, and no radios with 50 or 100 MHz channel spacing will be approved.



MAINTENANCE

1. Relating to a control surface, a mass balance is used to move the centre of gravity of the surface

- (a) forward of the centre of pressure to increase stability.
- (b) aft of the centre of pressure to increase stability.
- (c) forward of the centre of pressure to decrease stability, but increase controllability.
- (d) aft of the centre of pressure to decrease stability, but increase controllability.

2. A Frise aileron is one in which the

- (a) lateral stability is increased by differential movement of the ailerons.
- (b) adverse yaw is reduced by differential movement of the ailerons.
- (c) the drag is reduced on the down-going aileron by means of a slot, but increased on the up-going aileron by means of a protrusion below the wing.
- (d) the drag is increased on the down-going aileron by means of a slot, but decreased on the up-going aileron by means of a protrusion below the wing.

3. On an aircraft with wooden spars, aileron cable tension tends to

- (a) decrease when encountering drier conditions.
- (b) decrease when encountering wetter conditions.
- (c) increase from winter to summer.
- (d) remain relatively constant during seasonal changes because wood is comparatively dimensionally stable.

4. Vortex generators

- (a) result in the stall being reached at a higher angle of attack.
- (b) are fitted to increase the coefficient of lift in the cruise.
- (c) are fitted to assist in static discharge and to reduce skin friction in the cruise.
- (d) are fitted to provide a more obvious pre-stall buffet.

5. The use of MOGAS in aircraft of composite construction can be a hazard due to

- (a) static electrical charge build-up within the material.
- (b) possible deterioration of some composite materials by components of the fuel.
- (c) higher vapour pressures exceeding the venting capabilities of the fuel system.
- (d) lower vapour pressures exceeding the venting capabilities of the fuel system.

6. In a turbine engine, the engine pressure ratio is that between the pressures at the

- (a) exit of the high and low pressure turbines.



- (b) compressor discharge nozzle guide vanes and the low pressure turbine discharge pressure.
- (c) compressor inlet and the compressor discharge nozzle guide vanes.
- (d) compressor inlet and the last turbine stage discharge.

7. Blade creep is a term describing the

- (a) twisting of a turbine engine aerofoil due to the aerodynamic twisting moment applied by the gas stream.
- (b) permanent elongation of a turbine blade.
- (c) forward movement of a compressor blade due to foreign object damage.
- (d) an overlapping of turbine blades which is also known as shingling.

8. One function of a flow divider feeding the fuel nozzles on a fuel-injected piston engine is

- (a) to time the delivery of fuel with the ignition source.
- (b) to time the delivery of fuel to the injectors with the intake stroke.
- (c) to provide a pressure drop in series with the output of the fuel control unit.
- (d) to distribute the fuel proportionally to the injectors.

9. In a voltage regulator for a DC generator/alternator system, the current limiter functions to limit the generator output

- (a) voltage by increasing the series resistance.
- (b) current by increasing the series resistance.
- (c) to within its rated load by increasing the excitation.
- (d) to within its rated load by reducing the excitation.

10. Typically, on a piston engine, a gasket type thermocouple is used to measure

- (a) exhaust gas temperature.
- (b) cylinder head temperature.
- (c) outside air temperature.
- (d) turbine inlet temperature.

IFR OPERATIONS

AVALON, VIC (YMAV) RUNWAY 18 I.L.S. APPROACH

You are inbound to Avalon in a Beechcraft Bonanza (A36) operating as a category B aircraft and equipped with VOR, ILS, ADF, DME and TSO'd GNSS with current database. The tower is not active and the AWIS is broadcasting a wind 190/20 with broken cloud at 500ft. You are being radar vectored to intercept the LOC north of TEMPL at 3000ft.

The following questions relate to this approach, plates dated 5 June 2008.

1. Which of the following is correct if a holding pattern was required at TEMPL?

- (a) You must use ILS Y RWY 18 only with TEMPL entered as a waypoint in the GNSS to fix this position.
- (b) You must use ILS Y RWY 18 only with DME AV(VOR) being used to fix the TEMPL position.
- (c) You cannot use the ILS Y RWY 18 approach plate since it is only designed for tracking from overhead AV VOR and an arc join onto the LOC.
- (d) Either ILS Y or ILS Z RWY 18 plates may be used since TEMPL can be fixed with GNSS, VOR/DME or LOC/DME.

You are cleared to enter the holding pattern at TEMPL.

2. Which of the following best describes the outbound leg of the pattern?

- (a) Timing of one (1) minute must commence on achieving outbound heading since there is no locator to find the abeam position.
- (b) Timing of one (1) minute commences either on achieving outbound heading, or abeam the TEMPL fix (seen as an increasing distance from 10.5DME), whichever occurs later.
- (c) The turn inbound must commence at 15DME to intercept the LOC.
- (d) The turn inbound must commence at either one (1) minute or 15 DME whichever limit is first encountered.
- (e) Both b and d are correct.

You turn inbound to intercept the LOC north of TEMPL.

3. During the turn, the LOC starts to move inward from full-scale 'fly right'. When it reaches the position indicated:

Which of the following would be correct?

- (a) The aircraft would be passing a track of 182 left of the LOC.
- (b) The aircraft would be passing a track of 170 right of the LOC.
- (c) The aircraft would be passing a track of 177½ left of the LOC.
- (d) The aircraft would be passing a track of 174½ right of the LOC.

You establish on the LOC at 3000ft, VOR/DME and GNSS (reference waypoint AV VOR) reading 10.7.

4. Where would you expect to see the glideslope needle?

- (a) Above centre and moving downward.
- (b) Centred.
- (c) Below centre and moving upward.
- (d) Above centre and moving upward.

The nav aids are set up as follows:

NAV 1 LOC 109.5

DME 116.1

GNSS reference WPT AV VOR

5. What indications would you expect at the final approach point and on glideslope?

- (a) 1100ft, 5.3 DME/GNSS
- (b) 1350ft, 5.3 DME/GNSS
- (c) 1350ft, 3.9 DME/GNSS
- (d) 1350ft, 4.2 DME/GNSS

If the nav aids were to be set up as follows:

NAV 1 LOC 109.5

DME LOC 109.5

GNSS reference WPT AV VOR



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6. What indications would you now expect at the F.A.P. on glideslope?

- (a) 1100ft, 5.3 DME 3.9 GNSS
- (b) 1100ft, 3.9 DME 5.3 GNSS
- (c) 1350ft, 4.2 DME 5.3 GNSS
- (d) 1350ft, 5.3 DME/GNSS

7. If you are using ILS Y approach plate and the VOR/DME fails, the approach may continue utilising GNSS reference WPT - AV VOR. Is this true or false?

- (a) True
- (b) False

8. If you are using ILS Z approach plate and the LOC/DME fails, the approach may continue utilising GNSS reference WPT - AV LOC. Is this true or false?

- (a) True
- (b) False

9. What is the straight-in approach minima for this approach assuming a PEC of 50ft?

- (a) DA 440ft, VIS 19km.
- (b) DA 440ft, VIS 1.5km.
- (c) MDA 340ft, VIS 1.5km.
- (d) DA 340ft, VIS 1.5km.

10. If not visual at the minima, where is the missed approach point (MAPt)?

- (a) 2 DME/GNSS (reference WPT AV VOR).
- (b) Middle marker
- (c) 0.8 DME AV LOC/DME
- (d) DA.



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