

ATPL RADIO AIDS

1. Assuming the air temperature to be + 20 degree C, the local speed of sound will be –
- a) 621 kt
 - b) 669 kt
 - c) 610 kt

Ans: b

2. Assume an aircraft is flying in an area of high barometric pressure where the regional pressure setting is 1000 hpa. It now transits into an area where the regional QNH is 960 mb but the altimeter subscale is maintained at 1000. The aircraft will now be flying:
- a) 1200 ft. lower
 - b) 1200 ft. higher
 - c) 120 ft. higher

Ans: a

3. INS relies on:
- a) Satellite radio positioning waves to fix position
 - b) Accelerometers only to fly the aircraft along a given set of waypoints
 - c) Accelerometers and a rate gyro stabilized platform to measure acceleration and velocity and keep a continuous log off progress from initial erection to shut down

Ans: c

4. What inputs are fed to the ADC:

- A angle of attack
- B TAT
- C OAT
- D dynamic pressure
- E static Pressure
- F total pressure
- G AC electrical power
- H automatic commands

- a) A, B, D, E & G
- b) A, B, D, F & G
- c) A, B, E, F & G

Ans: c

5. GPWS may give warning of:

- A excessive sink rate
 - B excessive closure with terrain
 - C excessive proximity with ground when not in landing configuration
 - D excessive AOB
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- a) A, B & C
 - b) B, C & D
 - c) A, C & D

Ans: a

6. Inputs to TCAS II include:

- a) Mode S transponder to coordinates avoidance maneuvers
- b) Mode A transponder providing TA & RA data
- c) Mode C transponder coordinating avoidance maneuvering

Ans: a

7. After applying GPS differentials correction to a raw position, the refined position will be:

- a) Absolutely accurate
- b) Accurate to 1 meters
- c) Accurate to 1 to 3 meters

Ans: c

8. In EFIS, the triangle symbol represents:

- a) A selected course pointer and is available on the ADI when VOR or ILS is selected. It is coloured magenta
- b) An active waypoint and is available on the H.S.I when MAP, PLAN or VOR is selected, it is coloured green
- c) The aeroplane indicates its position at the apex of the triangle it is available on the H.S.I when MAP, VOR or ILS is selected and is coloured white

Ans: c

9. To increase the maximum theoretical range of pulse radar system:

- a) Reduce the PRF and increase the power
- b) Increase the PRF and reduce the power
- c) Reduce the PRF and increase the PRF

Ans: a

10. A magnetic compass must be swing after:

- a) A short term change in latitude
- b) Long term change in latitude
- c) Short term change in longitude

Ans: b

11. When a mode 'C' interrogation is responded to, vertical position of the aircraft is coded and transmitted. This vertical position is referred to:

- a) The sub scale of the altimeter
- b) Area QNH
- c) 1013.2 hPa

Ans: c

12. An aircraft is approaching to land and is exactly on the ILS glide slope as it crosses the outer marker (OM). The airport elevation is 2600 ft, published OM crossing altitude is 4200 ft and the ATIS / QNH / temp is 1013 / +40 deg C. which answer best describes the expected indicated altitude as the OM is crossed in these conditions:

- a) - 4400 ft
- b) - 4200 ft
- c) - 3850 ft

Ans: b

13. The aircraft is steering magnetic heading 155, RMI reads 330:

- (a) Which way would you turn to intercept magnetic 140 away from the NDB?
- (b) What would the RMI indicate at the point to intercept?

(a)	(b)
a) Right	320
b) Left	140
c) Left	320

Ans: c

14. An aircraft on its final approach. The ILS indicator shows two dot left and two dots above the centre line with 3 nm DME range from the threshold. The position of the aircraft is (ILS has a four dot scale)

Distance from extended R/W centre line	Height of the aircraft above the threshold
a) 115 meters right of centre line	245 meters
b) 115 meters left of centre line	310 meters
c) 230 meters right of centre line	106 meters

Ans: a

15. An airborne Doppler equipment is most likely to unlock over:

- a) A calm sea
- b) Mountainous terrain
- c) A desert surface

Ans: a

16. After take off, VNAV will engage when:

- a) A thrust setting other than take off power is set and the altitude selected is initially above the aircraft current height
- b) A steering command is initiated and the altitude is at least with the current aircraft height
- c) There is no AFCS comparator and all system flags are clear

Ans: a

17. GRID MORA value clear all terrain and manmade structures by:

- a) 2000 ft
- b) 2000 ft in mountainous area and 1000 ft in non-mountainous area as supplied by the state authority
- c) 1000 ft when highest elevation are 5000' MSL or lower and 2000 ft where highest elevations are 5000' ft MSL or higher

Ans: a

18. You are flying magnetic heading 300, with the Omni-bearing indicator to 300, the CDI needle showing 3 dots left and the TO flag showing. If the airplane is now turned to the reciprocal heading of magnetic heading 120. Assuming the OBI selection remains unaltered, what would be the indications on VOR display:

- a) CDI needle will shift 3 dots to the right
- b) TO flag will change to FROM
- c) There will not be any change in the VOR indication

Ans: c

19. In a Doppler VOR (DVOR), the reference signal is _____, the bearing signal is _____ and the direction of rotation of the bearing signal is _____:

- a) AM FM anti-clockwise
- b) AM FM clockwise
- c) FM AM anti-clockwise

Ans: a

20. If a standard rate turn is maintained, how much time would be required to turn to the left from a heading 090° to heading of 300°:

- a) 70 sec
- b) 40 sec
- c) 50 sec

Ans: c