

LEVEL FOUR  
AVIATION EVALUATION PRACTICE TEST

Below you will find a practice test for the Level 4 Aviation Evaluation that covers PO431, PO432, PO436, and PO437.

It is recommended that you focus on the material covered in the practice test as you prepare for your aviation test. The Instructional Guides for these POs will help you in completing this practice test and reviewing for your upcoming test. They can be found by following this link:

[https://drive.google.com/open?id=0B\\_GDf2Ni7IeNV1IwcnlfbDhwUDg](https://drive.google.com/open?id=0B_GDf2Ni7IeNV1IwcnlfbDhwUDg)

The actual test will occur on Wednesday, January 31, 2018. It will consist of 43 multiple-choice questions and 1 short answer question.

If you have any questions or would like to have your practice test corrected, please email OCdt Espenant at [n.espenant@632aircadets.com](mailto:n.espenant@632aircadets.com).

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**PART 1 MULTIPLE CHOICE**

Circle the answer that is the correct/most correct answer.

1. Conventional airfoils are generally the thickest at \_\_\_\_\_ percent of the chord.
  - a. 15.
  - b. 25.
  - c. 50.
  - d. 65.
  
2. Increasing the angle of incidence at the wing tip is called:
  - a. wash-in
  - b. wash-up
  - c. wash-out
  - d. wash-off
  
3. Aspect ratio is calculated by:
  - a. dividing the span by the average chord.
  - b. dividing the average chord by the span.
  - c. dividing the weight by the coefficient of lift.
  - d. dividing the weight by the coefficient of drag.
  
4. Which of the following is not a wing-tip modifications designed to increase lift / reduce drag?
  - a. wing-tip fuel tanks
  - b. winglets
  - c. drooping the wing tips
  - d. wing fences
  
5. Auxiliary airfoils that move out in front of the leading edge at high angles of attack are called:
  - a. slats
  - b. flaps
  - c. wing fences
  - d. slots
  
6. Passages built into the wing that affect the airflow in the same way as slats are called:
  - a. slats.
  - b. flaps.
  - c. wing fences.
  - d. slots.
  
7. Density altitude is:
  - a. the altitude displayed on the altimeter when it is set to 29.92 inches of mercury.
  - b. the actual height above Earth's surface.
  - c. the pressure altitude corrected for temperature.
  - d. the pressure altitude corrected for absolute errors.
  
8. What colour-coded arcs are found on the tachometer?
  - a. Green, orange, red.
  - b. Blue, red, green.

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- c. Green, yellow, red.
  - d. Black, white, red.
9. When flying into an area with relatively higher pressure, if the altimeter setting is not corrected, the altimeter will read:
- a. lower than the actual altitude
  - b. higher than the actual altitude
  - c. the correct altitude, provided that the pilot maintains a constant airspeed
  - d. the correct altitude, provided that the pilot maintains a constant angle of bank
10. The CAS corrected for the compressibility factor is the:
- a. CAS.
  - b. IAS.
  - c. TAS.
  - d. EAS.
11. What occurs to an engine as the altitude increases and the air becomes less dense?
- a. Power increases.
  - b. Power remains stable.
  - c. Power decreases.
  - d. Engine stops.
12. Where should the fuel tank be positioned in a gravity feed system?
- a. Above the carburetor
  - b. Below the carburetor
  - c. In-line with the carburetor
  - d. Below the centre of gravity
13. What is maintained throughout most of the diameter of the propeller by means of the variation in airfoil sections and the angle of attack?
- a. Pitch
  - b. Drag
  - c. Thrust
  - d. Dihedral
14. Gyroscopic inertia is also known as:
- a. precession.
  - b. rigidity in space.
  - c. fluidity in space.
  - d. rotation.
15. The ASI is connected to both the pitot pressure source and the static pressure port.
- a. True
  - b. False
16. Which two gauges measure the properties of the engine oil?
- a. Oil pressure and cylinder head temperature gauges
  - b. Oil temperature and outside air temperature gauges
  - c. Oil pressure and oil temperature gauges
  - d. Oil temperature and oil viscosity gauges

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17. The VSI measures the rate of change of the static pressure and indicates if the altitude is increasing or decreasing.
- true
  - false
18. What effect does surface friction have on winds?
- None.
  - It causes winds to back and veer.
  - It causes an increase in wind speeds.
  - It causes lower wind speeds than would be expected from the pressure gradient.
19. A katabatic wind:
- is the term for down slope winds flowing from high elevations down the slopes to valleys below.
  - is the term for up slope winds flowing from valleys up the slopes to high elevations above.
  - is the term for winds flowing from land to large bodies of water.
  - is the term for winds flowing from large bodies of water to land.
20. An air mass is a large section of the troposphere with uniform properties of \_\_\_\_\_ and \_\_\_\_\_ in the \_\_\_\_\_.
- temperature, pressure, horizontal.
  - pressure, moisture, horizontal.
  - temperature, moisture, horizontal.
  - temperature, moisture, vertical.
21. The three main factors that determine the weather in an air mass are:
- the moisture content, the temperature, and the stability of the air.
  - the presence of condensation nuclei, the ambient pressure, and the altitude of the isothermal layer.
  - the moisture content, the cooling process, and the altitude of the isothermal layer.
  - the moisture content, the cooling process, and the stability of the air.
22. In stable air:
- stratus cloud and poor visibility are common.
  - cumulus cloud and good visibility are common.
23. A \_\_\_\_\_ air mass is more dense and therefore \_\_\_\_\_, undercutting a \_\_\_\_\_ air mass which will \_\_\_\_\_ over the cold air.
- warm, sinks, cold, ascend.
  - cold, sinks, warm, ascend.
  - cold, ascends, warm, sink.
  - warm, ascends, cold, sink.
24. The shortest distance between two points on the surface of the Earth is represented by:
- a rhumb line.
  - true heading.
  - magnetic meridian.
  - a great circle.

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25. Lines drawn on a chart joining places having the same variation are:
- a. isobaric lines.
  - b. isogonic lines.
  - c. agonic lines.
  - d. rhumb lines.
26. Meridians of longitude are:
- a. measured from 0–90 degrees east and west of the prime meridian.
  - b. semi-great circles joining the geographic poles of the Earth.
  - c. measured in hours, minutes, and seconds.
  - d. all of the above.
27. On turns from south, northerly-turning error causes the compass to:
- a. lead.
  - b. indicate correctly.
  - c. lag.
  - d. none of the above.
28. The advantage of the rhumb line route is:
- a. it is the shortest distance between two points on the surface of the Earth.
  - b. it can be followed at higher altitudes than great circle routes.
  - c. the direction is constant, allowing a navigator to follow a constant heading.
  - d. it is the most fuel-efficient route, especially when travelling from east to west.
29. A compass heading is:
- a. magnetic heading minus west deviation.
  - b. magnetic heading plus west deviation.
  - c. true heading minus west deviation.
  - d. true heading plus west deviation.
30. The lubber line is:
- a. a painted white line that indicates the direction the airplane is heading.
  - b. in line with or parallel to the longitudinal axis of the airplane.
  - c. the location at which the compass point is read.
  - d. all of the above.

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**PART 2: SHORT ANSWER**

Label these diagrams

