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Regional Gliding School (Atlantic)



Practice Qualifying Exam #3

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QUESTIONS 1 - 40 TO BE ANSWERED BY BOTH GLIDER AND POWER APPLICANTS

1. The _____ is the term used to describe the complete structure of an airplane, including the fuel tanks and lines, but without engine(s) and instruments installed.

- A. Airframe
- B. Empennage
- C. Fuselage
- D. Canard

2. Some wings are constructed with no external bracing at all. These are known as _____ wings.

- A. Low wing
- B. Cantilever
- C. Monocoque
- D. Internally braced wings

3. As the angle of attack of an airfoil is increased up to the point of stall, the centre of pressure will move _____.

- A. Back
- B. Forward
- C. Up
- D. Will not move

4. _____ drag is caused by those parts of an aircraft which produce lift and therefore can not be completely eliminated.

- A. Parasite
- B. Form
- C. Induced
- D. Interference

5. _____ should be used in order to gain the most altitude in a given amount of time.

- A. Best angle of climb
- B. Best rate of climb
- C. Best climbing configuration

D. Best climb time

6. When gliding into a fairly strong headwind, greater distance may be covered over the ground if the speed is kept _____ the best lift / drag speed.

- A. Slightly slower than
- B. Much slower than
- C. Slightly faster than
- D. At

7. The maximum speed at which an airplane can be safely operated in smooth air is called _____.

- A. Maneuvering speed (V_a)
- B. Normal operating limit speed (V_{no})
- C. Max flap down speed (V_{fe})
- D. Never exceed speed (V_{ne})

8. In some ways a spiral dive resembles a spin. However, in a spin the airspeed is _____. In a spiral dive the airspeed is _____.

- A. Constant and relatively low, increasingly rapid
- B. Increasing rapidly, constant and relatively low
- C. Constant and relatively low, remains the same
- D. Increasing, decreasing

9. _____ refers to the shape of the wing as seen from directly above.

- A. Top view
- B. Plan form
- C. Form view
- D. Wing view

10. The steeper the angle of bank for any given airspeed, _____.

- A. The larger the radius of turn
- B. The greater the rate of turn
- C. The higher the stalling speed
- D. Both B and C

11. In straight and level flight an airplane has a load factor of 1, or 1 G. A 60° bank turn produces a load factor of _____.

- A. 2
- B. 1.5
- C. 3.86
- D. 1.04

12. The aspect ratio of a wing is computed by dividing the span by the _____.

- A. Camber
- B. Length

- C. Average chord
- D. Weight



13. The _____ of an airfoil is the curvature of the upper and lower surfaces.
- A. Chord
 - B. Camber
 - C. Pressure
 - D. Span
14. _____ is a term used to describe the direction of the airflow with respect to the wing.
- A. Angle of attack
 - B. Angle of incidence
 - C. Relative airflow
 - D. Angle of deviation
15. The lift drag ratio is determined by _____.
- A. Dividing the live load by the dead load
 - B. Dividing the lift coefficient by the drag coefficient
 - C. Dividing performance by endurance
 - D. Dividing the drag coefficient by the lift coefficient



16. Air flowing over the upper surface of the wing tends to flow _____.
- A. Slower than air flowing under the wing
 - B. Faster than air flowing under the wing
 - C. Inward
 - D. Both B and C
17. Which of the following factors does not affect the stalling speed (IAS) of an airfoil?
- A. C of G
 - B. Weight
 - C. Temperature
 - D. Flaps
18. The initial tendency of an aircraft to return to its original position is known as _____ stability
- A. Neutral
 - B. Dynamic
 - C. Directional
 - D. Static



19. An aircraft loaded with the C of G too far aft will have _____ tendency.
- A. Nose up
 - B. Nose down
 - C. Stable
 - D. No effect
20. Most high wing aircraft are laterally stable because the wings are attached in a high position on the fuselage and therefore the weight is low. When the aircraft is disturbed and one wing dips, the weight acts as a pendulum returning the aircraft to its original attitude. The cause of this stability is known as _____.
- A. An anhedral
 - B. Precession
 - C. Sweepback
 - D. Keel effect
21. The most important property of the atmosphere is _____.
- A. Mobility
 - B. Expansion
 - C. Compression
 - D. Upward air currents
- ▲
22. From a standpoint of weather, _____ is the most important component of the air.
- A. Water vapor
 - B. Oxygen
 - C. Pollution
 - D. None of the above
23. The ICAO standard atmosphere for the continent of North America assumes _____.
- A. The rate of decrease of temperature with height is 3 degrees/1,000 ft.
 - B. The air is a perfectly dry gas
 - C. A mean sea level pressure of 992 mb
 - D. A mean sea level temperature of 20°C
24. Warm air is _____ than cold air and therefore tends to _____.
- A. Less dense, rise
 - B. Less dense, sink
 - C. More dense, sink
 - D. More dense, rise
- ▲
25. If adjusted for the current pressure, the altimeter will read the true elevation of the aerodrome _____.
- A. Above mean ground level
 - B. Above sea level

- C. As zero
- D. Above the equator

26. Altostratus clouds fall into which category of clouds?

- A. Low
- B. Middle
- C. High
- D. Vertical development

27. A sea breeze occurs during the _____ and the wind blows from the _____ to the _____.

- A. Day, land, water
- B. Day, water, land
- C. Night, land, water
- D. Night, water, land

28. In a climb from the surface to several thousand feet AGL, the wind will _____ and _____.

- A. Back and decrease
- B. Back and increase
- C. Veer and decrease
- D. Veer and increase

29. Relative humidity _____.

- A. Is the ratio of water vapor present in the air compared to the amount the same volume of air could hold if it were saturated.
- B. Is the ratio of water vapor present in the air compared to the amount the same volume of air could hold if it were dry.
- C. Decreases when a given mass of air is cooled and no new water vapor is added.
- D. Both A and C

30. The rate of decrease of temperature with height is called the _____.

- A. Lapse rate
- B. Inversion rate
- C. Isothermal rate
- D. ITT rate

31. The mature stage of a thunderstorm cell is marked by the _____.

- A. Appearance of the top of the cell spreading out into an anvil structure
- B. Presence of heavy downdrafts
- C. Appearance of precipitation on the ground
- D. All of the above

32. Terminal Aviation Forecasts (TAFs) are issued _____ times daily and are