

AIRCADEMY



Part-FCL Fragenkatalog

BPL

(Auszug)

Veröffentlichte Beispielaufgaben

Herausgeber:

EDUCADEMY GmbH

info@aircademy.com

COPYRIGHT Vermerk:

Dieses Werk ist urheberrechtlich geschützt.

Die kommerzielle Nutzung des Werkes oder Ausschnitte aus dem Werk in Lehr- und Lernmedien ist nur nach vorheriger Zustimmung durch die Herausgeber erlaubt. Für Anfragen wenden Sie sich bitte an die Herausgeber

Bitte beachten Sie, dass dieser Auszug des Aufgabenkataloges nur einen Teil der Prüfungsaufgaben enthält. In der Prüfung werden auch unbekannte Aufgaben erscheinen.

Revision & Qualitätssicherung

Im Rahmen der stetigen Revision und Aktualisierung der internationalen Fragendatenbank für Privatpiloten (ECQB-PPL) sind wir stetig auf der Suche nach fachkompetenten Experten. Sollten Sie Interesse an einer Mitarbeit haben, wenden Sie sich per E-Mail an experts@aircademy.com.

Sollten Sie inhaltliche Anmerkungen oder Vorschläge zum Fragenkatalog haben, senden Sie diese bitte an info@aircademy.com.

-
- 1 The vertical extend of air with pressure changing by 1% with 80 m difference in height is referred to as ...**
- A) unstable
 - B) homogene
 - C) inhomogene
 - D) stable
- 2 How do volume, density and temperature change when a gas is being compressed?**
- A) Volume decreases, density decreases, temperature increases.
 - B) Volume increases, density decreases, temperature decreases.
 - C) Volume decreases, density increases, temperature increases.
 - D) Volume decreases, density decreases, temperature decreases.
- 3 With pressure and temperature given, any gas being heavier or lighter than air depends on what?**
- A) on the number of gas molecules
 - B) on the content of water vapour in the gas
 - C) on the mean kinetic energy of the molecules
 - D) on the molecule mass of the gas
- 4 What effect has an increase in air temperature inside the hull of a hot air balloon by a given difference in temperature?**
- A) The increase in load carrying capacity increases with height.
 - B) The increase in rate of climb increases with height.
 - C) The reduction in sink rate increases with height.
 - D) The increase in load carrying capacity decreases with height.
- 5 In a given height, a given amount of ballast is unloaded from a gas balloon.**
- How is the increase in height at 5500m different from the increase in height at MSL by unloading the same amount of ballast?**
- A) At 5500m the increase in height is four times as high.
 - B) At 5500m the increase in height is twice as high.
 - C) At both heights the same increase in height is observed.
 - D) At 5500m the increase in height is three times as high.
-

- 6 Aerostatic lift, amongst other factors, depends on...**
- A) balloon mass.
 - B) shape of the envelope.
 - C) on the speed.
 - D) air density.
- 7 The dynamic lift created by airflow across the top of the envelope of a balloon on the ground is referred to as?**
- A) Upper lift
 - B) Anti-ballast
 - C) Lower lift
 - D) False lift
- 8 How does the norm height of a gas balloon with maximum differential pressure change, when its mass is reduced by 1%?**
- A) Norm height increases by 80 m.
 - B) Norm height decreases by 800 m.
 - C) Norm height increases by 800 m.
 - D) Norm height decreases by 80 m.
- 9 With regard to gases, which statement is correct?**
- A) Pressure decreases with increasing temperature and constant volume.
 - B) Temperature increases with increasing volume and decreasing pressure.
 - C) Volume increases with increasing temperature and constant pressure.
 - D) Temperature decreases with increasing pressure and constant volume.
- 10 The aerostatic lift corresponds to which force?**
- A) the dynamic force due to airstream across the top of the hull
 - B) the drag due to airstream around the balloon envelope
 - C) the weight of the displaced air
 - D) the weight of the balloon less ballast

- 11 The force resulting from the (positive) difference from load-bearing capacity and weight force, is referred to as:**
- A) Load force
 - B) Upper force
 - C) Climb force
 - D) Lift force
- 12 The ratio between air pressures at different heights is referred to as:**
- A) Height number
 - B) Height ratio
 - C) Height value
 - D) Pressure number
- 13 What is the relationship between pressure and volume of a dry gas at constant temperature?**
- A) The volume is inversely proportional to pressure
 - B) The ration between pressure and volume is constant
 - C) The volume increases by a factor of 4 with double pressure
 - D) The volume increases proportional with pressure
- 14 Which of the following statements is correct?**
- A) The density of hull air is lower than environmental air only if the hull temperature is higher than environmental temperature
 - B) The density of hull air is higher with increasing environmental pressure
 - C) The density of hull air is lower than environmental air only if the hull temperature is lower than environmental temperature
 - D) The density of hull air is lower with decreasing environmental pressure
- 15 Doubling the pressure of a dry gas at constant temperature results in a change of the volume to:**
- A) double the previous value.
 - B) a quarter of the previous value.
 - C) half the previous value.
 - D) four times the previous value.
- 16 At equilibrium the inner overpressure of a free balloon is highest at:**
- A) at the center of the hull.
 - B) the upper pole.
 - C) at the equator.
 - D) at the lower opening.

- 17 If heating is stopped and the parachute vent is not activated, a hot air-balloon reaches a final sinkrate of approximately:**
- A) 6 m/s
 - B) 2 m/s
 - C) 10 m/s
 - D) 20 m/s
- 18 What statement is correct with regard to change in temperature?**
- A) During descent, the carrying gas warms adiabatically.
 - B) During descent, the carrying gas warms due to thermal exchange with environmental air.
 - C) During climb, the carrying gas warms due to thermal exchange with environmental air.
 - D) During climb, the carrying gas warms adiabatically.
- 19 What is a direct consequence of increase of the carrying gas temperature at a gas balloon with maximum differential pressure?**
- A) Weight force increases.
 - B) Lift force decreases.
 - C) Load-bearing capability increases.
 - D) Climb force decreases.
- 20 How does the norm height of a gas balloon with maximum differential pressure change by dropping ballast?**
- A) It increases by 80 m when total mass is reduced by 1%.
 - B) It decreases by 8 m when total mass is reduced by 10%.
 - C) It decreases by 80 m when total mass is reduced by 1%.
 - D) It increases by 8 m when total mass is reduced by 10%.
- 21 According ISA, what is the density of air at MSL?**
- A) 1.225 g/m³
 - B) 1.225 kg/m³
 - C) 12.25 kg/m³
 - D) 1225 kg/m³

22 The final sinkrate of a hot-air ballon is achieved after descent over a vertical distance of:

- A) 1000 - 2000 m
- B) 50 - 100 m
- C) 500 - 1000 m
- D) 250 - 450 m

23 The increase in load carrying capability by increasing the hull air temperature by the same temperature difference ...

- A) decreases with sinking.
- B) decreases with altitude.
- C) increases with balloon mass.
- D) increases with altitude.

24 What impact may rain have on operation of a hot-air balloon?

- A) Rain drops hitting on the hull reduce the lift force.
- B) The hull is cooled, resulting in less gas consumption.
- C) Total mass and gas consumption increase
- D) The hull is deformed, which reduces lift.