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**Part-FCL question bank**

**BPL**

*(Excerpt)*

**Published sample  
questions**

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If you have any comments or suggestions regarding the content of the questionnaire, please send them to [info@aircademy.com](mailto:info@aircademy.com).

**1 QFE is the...**

- A) magnetic bearing to a station.
- B) barometric pressure at a reference datum, typically the runway threshold of an airfield.
- C) altitude above the reference pressure level 1013.25 hPa.
- D) barometric pressure adjusted to sea level, using the international standard atmosphere (ISA).

**2 In which way may an altimeter subscale which is set to an incorrect QNH lead to an incorrect altimeter reading?**

- A) If the subscale is set to a higher than actual pressure, the indication is too high.  
This may lead to much closer proximity to the ground than intended
- B) If the subscale is set to a higher than actual pressure, the indication is too low.  
This may lead to much greater heights above the ground than intended
- C) If the subscale is set to a lower than actual pressure, the indication is too high.  
This may lead to much closer proximity to the ground than intended
- D) If the subscale is set to a lower than actual pressure, the indication is too low.  
This may lead to much closer proximity to the ground than intended

**3 Lower-than-standard temperature may lead to...**

- A) an altitude indication which is too low.
- B) an altitude indication which is too high.
- C) a blockage of the Pitot tube by ice, freezing the altimeter indication to its present value.
- D) a correct altitude indication as long as the altimeter subscale is set to correct for non-standard temperature.

**4 A true altitude is...**

- A) an altitude above mean sea level corrected for non-standard temperature.
- B) a pressure altitude corrected for non-standard temperature.
- C) a height above ground level corrected for non-standard pressure.
- D) a height above ground level corrected for non-standard temperature.

**5 During a flight in colder-than-ISA air the indicated altitude is...**

- A) equal to the true altitude.
- B) equal to the standard altitude.
- C) higher than the true altitude.
- D) lower than the true altitude.

**6 Which instrument can be affected by the hysteresis error?**

- A) Direct reading compass
- B) Altimeter
- C) Vertical speed indicator
- D) Tachometer

- 7 The measurement of altitude is based on the change of the...**
- A) total pressure.
  - B) dynamic pressure.
  - C) static pressure.
  - D) differential pressure.
- 8 Which of the following options states the working principle of a vertical speed indicator?**
- A) Measuring the present static air pressure and comparing it to the static air pressure inside a reservoir
  - B) Total air pressure is measured and compared to static pressure
  - C) Static air pressure is measured and compared against a vacuum
  - D) Measuring the vertical acceleration through the displacement of a gimbal-mounted mass
- 9 The vertical speed indicator measures the difference of pressure between...**
- A) the present total pressure and the total pressure of a previous moment.
  - B) the present static pressure and the static pressure of a previous moment.
  - C) the present dynamic pressure and the dynamic pressure of a previous moment.
  - D) the present dynamic pressure and the static pressure of a previous moment.
- 10 What values are usually marked with a red line on instrument displays?**
- A) Caution areas
  - B) Recommended areas
  - C) Operational limits
  - D) Operational areas
- 11 The term "static pressure" is defined as pressure...**
- A) inside the airplane cabin.
  - B) sensed by the pitot tube.
  - C) of undisturbed airflow.
  - D) resulting from orderly flow of air particles.
- 12 The altimeter's reference scale is set to airfield pressure (QFE).**
- What indication is shown during the flight?**
- A) Altitude above MSL
  - B) Airfield elevation
  - C) Pressure altitude
  - D) Height above airfield

- 13 A vertical speed indicator connected to a too big equalizing tank results in...**
- A) no indication
  - B) indication too high
  - C) indication too low
  
  - D) mechanical overload
- 14 A vertical speed indicator measures the difference between...**
- A) instantaneous total pressure and previous total pressure.
  
  - B) dynamic pressure and total pressure.
  - C) instantaneous static pressure and previous static pressure.
  - D) total pressure and static pressure.
- 15 The electronic remote hull thermometer of a hot-air balloon is operating by which principle?**
- A) Resistance- / Semiconductor principle.
  - B) Bernoulli principle.
  - C) Venturi principle.
  - D) Boyle principle.
- 16 What is indicated by a yellow arc on the hull thermometer with an analog scale?**
- A) the cautious area
  - B) readability improvement
  
  - C) the normal operating area
  - D) maximum permissible values
- 17 Under which conditions false readouts are possible on hull thermometers using radio communication from sensor to indicator panel?**
- A) when the sensor battery is almost empty
  - B) when radio messages are received
  - C) when the hull temperature exceeds 110 °C
  - D) when there is no intervisibility to temperature sensor
- 18 Why should liquid gas bottles for hot-air balloons be transported upright?**
- A) To prevent exiting of residual gas.
  - B) To prevent damage on the riser tube.
  - C) To keep the armature panel clean.
  - D) Because no other positions are approved.

**19 The burning gas is pushed from the liquid gas phase through the riser tube to which component?**

- A) to the pressure relief device
- B) to the fill level indicator
- C) to the controller
- D) to the evaporator

**20 The main blast valve is located where?**

- A) at the upper hull part
- B) at the burner
- C) at the main cylinder
- D) at the hull equator

**21 What is the purpose of the sounding pipe valve?**

- A) It allows pressure equalization during cruise at high altitude.
- B) For venting the liquid gas container bottle.
- C) To indicate the volumetric filling limit.
- D) It prevents air from entering the burner system,

**22 The hull of a hot-air balloon is made up by which material?**

- A) synthetic fabric
- B) Cotton fabric
- C) linen fabric
- D) Silk fabric

**23 The carrying ropes of a hot-air balloon are made up from:**

- A) copper
- B) stainless steel
- C) manila rope
- D) duralum

**24 The basket ropes of a hot-air balloon are usually fixed to ...**

- A) to the Scoop.
- B) the Nomex apron.
- C) the burner cage.
- D) the burner.

**25 Which parts of a hot-air balloon provide protection for the basket during landing?**

- A) Rubber pads
- B) Steel runners
- C) Wheels
- D) Wearing strips

**26 Why should a liquid gas bottle only be filled to 80% of its volume?**

- A) To provide space for temperature-induced expansion.
- B) To provide space for expansion in case of external cooling.
- C) Because temperature would get too high.
- D) Because it would get too heavy otherwise.

**27 Damages to the hot-air balloon hull fabric are most critical in which area?**

- A) At the top area.
- B) In the lower third.
- C) At the equator.
- D) In the apron area.

**28 The purpose of the drag lines of the parachute is ...**

- A) To transfer the force from the pull rope to the parachute.
- B) To transfer the carrying force of the balloon in the top opening area.
- C) To keep the parachute in the center of the top opening.
- D) To transfer the force from the pull rope to the free-balloon hull.

**29 About the lower end of the pull rope of a hot-air balloon it can be said:**

- A) It is particularly heat resistant.
- B) It has to be lubricated before every take-off.
- C) It is fixed to the lower basket area.
- D) It has an especially smooth surface.

**30 The vapour pressure of propane gas in a bottle depends in particular on:**

- A) the gas amount.
- B) the temperature.
- C) the rigidity of the bottle.
- D) the size of the bottle.

**31 Which gas is heavier than air?**

- A) Helium
- B) Propane
- C) Illuminating gas
- D) Hydrogen

**32 What amount of ignitable mixture can be made from 1 L (0,001 m<sup>3</sup>) liquid propane gas?**

- A) 1,2 m<sup>3</sup>
- B) 12 m<sup>3</sup>
- C) 0,38 m<sup>3</sup>
- D) 0,26 m<sup>3</sup>

**33 Which of the gases stated below is NOT made up from hydrocarbons?**

- A) Hydrogen
- B) Butane
- C) Methane
- D) Propane

**34 What is the purpose of the vapourizer coils of the burner system?**

- A) to induce a rotation movement in the liquid gas to get a better mixture
- B) to vapourize the liquid gas, so it will be emitted from the burner nozzle in gaseous form
- C) to heat the liquid gas, so it will vapourize immediately after exiting the burner nozzle
- D) for cooling of the liquid gas after exiting the burner nozzles

**35 The towing rope of a gas balloon can be found on ...**

- A) the rip panel side
- B) the sliding side
- C) the sandpouwer side
- D) the entry side

**36 The density of helium gas under standard conditions is:**

- A) 0,2 kg / m<sup>3</sup>
- B) 0,02 g / m<sup>3</sup>
- C) 2 kg / m<sup>3</sup>
- D) 0,2 g / m<sup>3</sup>



**37 What is the purpose of the closing rope of a gas balloon?**

- A) to close the appendix
- B) to close the sand disposer
- C) to close the emergency opening
- D) to secure the towing rope

**38 The emergency opening of a gas balloon is located where?**

- A) at the upper pole
- B) to the side of the valve
- C) at the equator
- D) to the side of the appendix

**39 A gas balloon has to be equipped with which tethers?**

- A) 1 at 30 m or 3 at 10 m
- B) 2 at 10 m or 1 at 20 m
- C) 1 at 40 m or 4 at 10 m
- D) 2 at 20 m or 1 at 10 m

**40 The burst of a hydrogen pressure line may result in what risk?**

- A) The risk of hydrogen dissipating to the atmosphere and poisoning the air
- B) The risk of hydrogen self-igniting and burning with invisible flame.
- C) The risk of hydrogen collecting in the basket and causing breath shortness.
- D) The risk of hydrogen self-igniting and burning with a bright flame.

**41 What technical measure provides electric conductivity to the hull ropes of a web-less gas balloon?**

- A) A surface painting.
- B) Impregnation of the ropes.
- C) Embedded steel threads (filaments).
- D) Wrapping with plastic tape.