

# Exam simulation

Exam BPL Gas - Balloon Pilot License - Principles of Flight (Balloon)



QuizVds.it

STUDENT NAME:

DATE AND TIME:

## 01. What is the meaning of the abbreviation "SERA"?

---

- a) Selective Radar Altimeter
- b) Standard European Routes of the Air
- c) Specialized Radar Approach
- d) Standardized European Rules of the Air

## 02. How does the norm height of a gas balloon with maximum differential pressure change by dropping ballast?

---

- a) It increases by 8 m when total mass is reduced by 10%
- b) It increases by 80 m when total mass is reduced by 1%
- c) It decreases by 8 m when total mass is reduced by 10%
- d) It decreases by 80 m when total mass is reduced by 1%

## 03. How may passengers assist the balloon pilot during landing preparation?

---

- a) By activating the emergency opening
- b) By stowing of loose parts
- c) By activating the vents
- d) By activating the pull rope

# Exam simulation

Exam BPL Gas - Balloon Pilot License - Principles of Flight (Balloon)



QuizVds.it

04. Given the following masses: Empty mass 260 kg Instruments 20 kg per gas container (full): 30 kg per person: 80 kg Assuming temperature ISA+10, how many persons may be carried in the basket at maximum, if the balloon with 4 gas containers has to climb up to pressure altitude 12.000 ft ? (use attachment ECQB-PPL\_BPL001)

## Auszug aus dem Flughandbuch



- a) 3
- b) 5
- c) 4
- d) 2

# Exam simulation

Exam BPL Gas - Balloon Pilot License - Principles of Flight (Balloon)



QuizVds.it

## 05. What weather is likely to be experienced during "Foehn" in the Bavarian area close to the Alps?

---

- a) High pressure area overhead Biscay and low pressure area in Eastern Europe
- b) Nimbostratus cloud in the southern Alps, rotor clouds at the lee side, warm and dry wind
- c) Cold, humid downhill wind on the lee side of the Alps, flat pressure pattern
- d) Nimbostratus cloud in the northern Alps, rotor clouds at the windward side, warm and dry wind

## 06. What is the purpose of "interception lines" in visual navigation?

---

- a) They are used as easily recognizable guidance upon a possible loss of orientation
- b) To visualize the range limitation from the departure aerodrome
- c) They help to continue the flight when flight visibility drops below VFR minima
- d) To mark the next available en-route airport during the flight

## 07. The shortest distance between two points on Earth is represented by a part of...

---

- a) A small circle
- b) A great circle
- c) A rhumb line
- d) A parallel of latitude

## 08. The density of helium gas under standard conditions is:

---

- a) 0,2 kg / m<sup>3</sup>
- b) 2 kg / m<sup>3</sup>
- c) 0,02 g / m<sup>3</sup>
- d) 0,2 g / m<sup>3</sup>

## 09. A risk factor for decompression sickness is...

---

- a) Scuba diving prior to flight
- b) 100 % oxygen after decompression
- c) Sports
- d) Smoking

# Exam simulation

Exam BPL Gas - Balloon Pilot License - Principles of Flight (Balloon)



QuizVds.it

## 10. Distress messages contain...

---

- a) Information concerning the safety of an aircraft, a watercraft or some other vehicle or person in sight
- b) Information concerning aircraft and their passengers which face a grave and imminent threat and require immediate assistance
- c) Information concerning urgent spare parts which are required for a continuation of flight and which have to be ordered in advance
- d) Information concerning the apron personnel and which imply an imminent danger to landing aircraft

## 11. Electronic devices on board of an aeroplane have influence on the...

---

- a) Direct reading compass
- b) Artificial horizon
- c) Airspeed indicator
- d) Turn coordinator

## 12. Which of the stated surfaces will reduce the wind speed most due to ground friction?

---

- a) Flat land, lots of vegetation cover
- b) Oceanic areas
- c) Mountainous areas, vegetation cover
- d) Flat land, deserted land, no vegetation

## 13. Information about operational limits, loading and performance about an aircraft can be taken from which document?

---

- a) Airworthiness certificate
- b) Operating handbook
- c) Certificate of registration
- d) Flight Log book

## 14. With pressure and temperature given, any gas being heavier or lighter than air depends on what?

---

- a) On the content of water vapour in the gas
- b) On the mean kinetic energy of the molecules
- c) On the number of gas molecules
- d) On the molecule mass of the gas

# Exam simulation

Exam BPL Gas - Balloon Pilot License - Principles of Flight (Balloon)



QuizVds.it

## 15. What is the call sign of the flight information service?

---

- a) Advice
- b) Flight information
- c) Info
- d) Information

## 16. Wake turbulence is caused by...

---

- a) Wind shear at the wingtip of an aerofoil
- b) Jet blast behind a turbine engine
- c) Turbulence at the downwind side of a mountain range
- d) Pressure compensation at the wingtip of an aerofoil

## 17. What effect has air temperature on the carrying force and on maximum take-off mass of a balloon?

---

- a) Maximum take-off mass is higher at low temperatures
- b) Maximum take-off mass is lower at low temperatures
- c) Carrying force is higher at low temperatures
- d) Carrying force is lower at low temperatures

## 18. What has to be considered at moderate wind speeds during a balloon ride across mountainous area with cloud-free sky?

---

- a) Icing conditions
- b) Altimeter indication too low
- c) Lee waves and severe up- and downdrafts
- d) Decreasing burner power

## 19. 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 800 m
- b) Norm height decreases by 800 m
- c) Norm height decreases by 80 m
- d) Norm height increases by 80 m

# Exam simulation

Exam BPL Gas - Balloon Pilot License - Principles of Flight (Balloon)



QuizVds.it

## 20. What has to be considered when entering an RMZ?

---

- a) To obtain a clearance to enter this area
- b) The transponder has to be switched on Mode C and squawk 7000
- c) To permanently monitor the radio and if possible to establish radio contact
- d) To obtain a clearance from the local aviation authority

## 21. A distance of 7.5 cm on an aeronautical chart represents a distance of 60.745 NM in reality. What is the chart scale?

---

- a) 1 : 500000
- b) 1 : 1500000
- c) 1 : 1000000
- d) 1 : 150000

## 22. The majority of aviation accidents are caused by...

---

- a) Human failure
- b) Technical failure
- c) Geographical influences
- d) Meteorological influences

## 23. What statement is correct with regard to change in temperature?

---

- a) During climb, the carrying gas warms due to thermal exchange with environmental air
- b) During descent, the carrying gas warms adiabatically
- c) During descent, the carrying gas warms due to thermal exchange with environmental air
- d) During climb, the carrying gas warms adiabatically

## 24. Which air traffic services can be expected within an FIR (flight information region)?

---

- a) FIS (flight information service) ALR (alerting service)
- b) ATC (air traffic control) FIS (flight information service)
- c) AIS (aeronautical information service) SAR (search and rescue)
- d) ATC (air traffic control) AIS (aeronautical information service)

# Exam simulation

Exam BPL Gas - Balloon Pilot License - Principles of Flight (Balloon)



QuizVds.it

**25. At time of take-off, ground wind speed is 3 m/s. Along take-off flight path, at a distance of 360 m obstacles erect up to 40 m. What is the minimum rate of climb to keep a clearance of 50 m above the obstacles? (Consider double the ground wind speed for the flight path)**

---

- a) 1 m/s
- b) 2 m/s
- c) 0.5 m/s
- d) 1.5 m/s

**26. According ISA, what is the density of air at MSL?**

---

- a) 1.225 g/m<sup>3</sup>
- b) 1225 kg/m<sup>3</sup>
- c) 1.225 kg/m<sup>3</sup>
- d) 12.25 kg/m<sup>3</sup>

**27. What is the meaning of the phrase "Approved"?**

---

- a) An error has been made in this transmission. The correct version is...
- b) Permission for proposed action is granted
- c) I have received all of your last transmission
- d) I understand your message and will comply with it

**28. Which information from a ground station does not require readback?**

---

- a) SSR-Code
- b) Wind
- c) Altitude
- d) Runway in use

**29. Where are the two polar circles?**

---

- a) 23.5° north and south of the poles
- b) 23.5° north and south of the equator
- c) At a latitude of 20.5°S and 20.5°N
- d) 20.5° south of the poles

# Exam simulation

Exam BPL Gas - Balloon Pilot License - Principles of Flight (Balloon)



QuizVds.it

## 30. The movement of air flowing apart is called...

---

- a) Divergence
- b) Concordance
- c) Convergence
- d) Subsidence

## 31. Wake turbulence is particularly strong...

---

- a) When flying at high speeds
- b) When flying at high altitudes
- c) When flying at low speeds
- d) When flying at low altitudes

## 32. The ratio between air pressures at different heights is referred to as:

---

- a) Height value
- b) Pressure number
- c) Height ratio
- d) Height number

## 33. The term "static pressure" is defined as pressure...

---

- a) Resulting from orderly flow of air particles
- b) Inside the airplane cabin
- c) Sensed by the pitot tube
- d) Of undisturbed airflow

## 34. What is a direct consequence of increase of the carrying gas temperature at a gas balloon with maximum differential pressure?

---

- a) Climb force decreases
- b) Weight force increases
- c) Lift force decreases
- d) Load-bearing capability increases

# Exam simulation

Exam BPL Gas - Balloon Pilot License - Principles of Flight (Balloon)



QuizVds.it

**35. During buildup of a gas balloon, sacks with sand are hooked up. The end of the hooks should be directed ...**

---

- a) Parallel to net path
- b) Outside
- c) Inside
- d) Perpendicular to net path

**36. During a flight, a flight plan can be filed at the...**

---

- a) Search and Rescue Service (SAR)
- b) Next airport operator en-route
- c) Flight Information Service (FIS)
- d) Aeronautical Information Service (AIS)

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

---

- a) The risk of hydrogen collecting in the basket and causing breath shortness
- b) The risk of hydrogen self-igniting and burning with a bright flame
- c) The risk of hydrogen dissipating to the atmosphere and poisoning the air
- d) The risk of hydrogen self-igniting and burning with invisible flame

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

---

- a) Wrapping with plastic tape
- b) A surface painting
- c) Impregnation of the ropes
- d) Embedded steel threads (filaments)

**39. What change results from an increase in temperature of the carrying gas and of the environmental air at a gas balloon at maximum differential pressure?**

---

- a) The load capability decreases by 4% per K temperature change
- b) The load capability increases by 4% per K temperature change
- c) The load capability increases by 0.4% per K temperature change
- d) The load capability decreases by 0.4% per K temperature change

# Exam simulation

Exam BPL Gas - Balloon Pilot License - Principles of Flight (Balloon)



QuizVds.it

## 40. Which instrument can be affected by the hysteresis error?

---

- a) Tachometer
- b) Altimeter
- c) Vertical speed indicator
- d) Direct reading compass

## 41. With other factors remaining constant, decreasing temperature results in...

---

- a) Decreasing spread and decreasing relative humidity
- b) Decreasing spread and increasing relative humidity
- c) Increasing spread and decreasing relative humidity
- d) Increasing spread and increasing relative humidity

## 42. What factors are required for the formation of precipitation in clouds?

---

- a) High humidity and high temperatures
- b) The presence of an inversion layer
- c) Calm winds and intensive sunlight insolation
- d) Moderate to strong updrafts

## 43. Which abbreviation is used for the term "abeam"?

---

- a) ABB
- b) ABA
- c) ABM
- d) ABE

## 44. After take-off with a balloon, obstacles at a distance of 300 m erect in expected flight path up to 40 m height. Rate of climb is expected with 1.5 m/s. What maximum actual wind speed can be accepted to maintain a clearance of 50 m above obstacles, assuming double the actual wind speed for calculation?

---

- a) 8 m/s
- b) 2.5 m/s
- c) 10 m/s
- d) 1 m/s

# Exam simulation

Exam BPL Gas - Balloon Pilot License - Principles of Flight (Balloon)



QuizVds.it

## 45. What information is broadcasted on a VOLMET frequency?

---

- a) Meteorological information
- b) NOTAMS
- c) Navigational information
- d) Current information

## 46. Which weather chart shows the actual air pressure as in MSL along with pressure centers and fronts?

---

- a) Wind chart
- b) Hypsometric chart
- c) Prognostic chart
- d) Surface weather chart

## 47. How can you obtain meteorological information concerning airports during a cross-country flight?

---

- a) AIRMET
- b) VOLMET
- c) METAR
- d) GAMET

## 48. Which transponder code indicates a radio failure?

---

- a) 7700
- b) 7600
- c) 7500
- d) 7000

## 49. The term "aerodrome elevation" is defined as...

---

- a) The highest point of the landing area
- b) The average value of the height of the manoeuvring area
- c) The highest point of the apron
- d) The lowest point of the landing area

# Exam simulation

Exam BPL Gas - Balloon Pilot License - Principles of Flight (Balloon)



QuizVds.it

**50. The pressure at MSL in ISA conditions is...**

---

- a) 1013.25 hPa
- b) 113.25 hPa
- c) 1123 hPa
- d) 15 hPa

**51. (For this question, please use annex PFP-063) According ICAO, what symbol indicates a general spot elevation?**

---

- A 300
- B (300)
- C •1737
- D •1737

PFP-063

- a) D
- b) B
- c) A
- d) C

**52. What is meant by the term "terrestrial navigation"?**

---

- a) Orientation by instrument readings during visual flight
- b) Orientation by ground features during visual flight
- c) Orientation by GPS during visual flight
- d) Orientation by ground celestial object during visual flight

# Exam simulation

Exam BPL Gas - Balloon Pilot License - Principles of Flight (Balloon)



QuizVds.it

**53. In a METAR, "heavy rain" is designated by the identifier...**

---

- a) RA
- b) +SHRA
- c) +RA
- d) SHRA

**54. Where has the ballast aboard a gas balloon to be stored during cruise?**

---

- a) Inside the basket
- b) Below the net ending ropes
- c) At the outside wall of the basket
- d) Inside the tow shield

**55. How can wind speed and wind direction be derived from surface weather charts?**

---

- a) By annotations from the text part of the chart
- b) By alignment of lines of warm- and cold fronts
- c) By alignment and distance of isobaric lines
- d) By alignment and distance of hypsometric lines

**56. Given: TC: 183°; WCA: +011°; MH: 198°; CH: 200° What are TH and VAR?**

---

- a) TH: 172°. VAR: 004° E
- b) TH: 194°. VAR: 004° E
- c) TH: 172°. VAR: 004° W
- d) TH: 194°. VAR: 004° W

**57. What is the correct way to transmit the call sign HB-YKM?**

---

- a) Hotel Bravo Yuliett Kilo Mikro
- b) Home Bravo Yuliett Kilo Mike
- c) Home Bravo Yankee Kilo Mikro
- d) Hotel Bravo Yankee Kilo Mike

# Exam simulation

Exam BPL Gas - Balloon Pilot License - Principles of Flight (Balloon)



QuizVds.it

## 58. Where does the inclination reach its lowest value?

---

- a) At the geographic equator
- b) At the magnetic poles
- c) At the magnetic equator
- d) At the geographic poles

## 59. What is the difference in latitude between A (12°53'30"N) and B (07°34'30"S)?

---

- a) 05°19'00"
- b) 20°28'00"
- c) 20.28°
- d) 05.19°

## 60. What pressure pattern may result from cold-air inflow in high tropospheric layers?

---

- a) Formation of a low in the upper troposphere
- b) Formation of a large ground low
- c) Alternating pressure
- d) Formation of a high in the upper troposphere

## 61. What is an indication for a macho attitude?

---

- a) Quick resignation in complex and critical situations
- b) Comprehensive risk assessment when faced with unfamiliar situations
- c) Careful walkaround procedure
- d) Risky flight maneuvers to impress spectators on ground

## 62. The altimeter's reference scale is set to airfield pressure (QFE). What indication is shown during the flight?

---

- a) Airfield elevation
- b) Pressure altitude
- c) Altitude above MSL
- d) Height above airfield

# Exam simulation

Exam BPL Gas - Balloon Pilot License - Principles of Flight (Balloon)



QuizVds.it

---

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

---

- a) Higher than the true altitude
- b) Equal to the standard altitude
- c) Lower than the true altitude
- d) Equal to the true altitude

---

**64. A balloon pilot decides to use one or more separate gas containers for initial heating during buildup. To ensure a safe buildup ...**

---

- a) To expedite take-off, the gas containers have to be stored outside
- b) No separate gas containers are allowed during buildup
- c) The gas containers have to be fixed safely inside the basket
- d) Two gas containers (one inside, one outside) are to be used

---

**65. What weather development will result from convergence at ground level?**

---

- a) Ascending air and cloud formation
- b) Ascending air and cloud dissipation
- c) Descending air and cloud formation
- d) Descending air and cloud dissipation

# Exam simulation





Exam BPL Gas - Balloon Pilot License - Principles of Flight (Balloon)



QuizVds.it

**66. (For this question, please use annex PFP-062) According ICAO, what symbol indicates a civil airport (not international airport) with paved runway?**

---

- A 
- B 
- C 
- D 

PFP-062

- a) C
- b) B
- c) D
- d) A

**67. 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

**68. Why should balloon pilot or passengers not wear any clothes made of silk or synthetic fibers during ride with a gas balloon?**

---

- a) Because of the danger of explosions induced by sparks after electrical discharge
- b) Because these materials may lead to malfunction of some instruments
- c) Because the total mass will be increased beyond the operating limits
- d) Because these materials may lead to noise in radio reception

# Exam simulation

Exam BPL Gas - Balloon Pilot License - Principles of Flight (Balloon)



QuizVds.it

## 69. With regard to gases, which statement is correct?

---

- a) Temperature decreases with increasing pressure and constant volume
- b) Volume increases with increasing temperature and constant pressure
- c) Pressure decreases with increasing temperature and constant volume
- d) Temperature increases with increasing volume and decreasing pressure

## 70. Which altitude marks the lower limit where the body is unable to completely compensate the effects of the low atmospheric pressure?

---

- a) 12000 feet
- b) 7000 feet
- c) 22000 feet
- d) 5000 feet

# Exam simulation

Exam BPL Gas - Balloon Pilot License - Principles of Flight (Balloon)



QuizVds.it

## Response Scheme

Compare your answers with the following diagram and mark your score!

01: <b>D</b>	02: <b>B</b>	03: <b>B</b>	04: <b>A</b>
05: <b>B</b>	06: <b>A</b>	07: <b>B</b>	08: <b>A</b>
09: <b>A</b>	10: <b>B</b>	11: <b>A</b>	12: <b>C</b>
13: <b>B</b>	14: <b>D</b>	15: <b>D</b>	16: <b>D</b>
17: <b>C</b>	18: <b>C</b>	19: <b>D</b>	20: <b>C</b>
21: <b>B</b>	22: <b>A</b>	23: <b>B</b>	24: <b>A</b>
25: <b>D</b>	26: <b>C</b>	27: <b>B</b>	28: <b>B</b>
29: <b>A</b>	30: <b>A</b>	31: <b>C</b>	32: <b>D</b>
33: <b>D</b>	34: <b>D</b>	35: <b>B</b>	36: <b>C</b>
37: <b>D</b>	38: <b>D</b>	39: <b>D</b>	40: <b>B</b>
41: <b>B</b>	42: <b>D</b>	43: <b>C</b>	44: <b>B</b>
45: <b>A</b>	46: <b>D</b>	47: <b>B</b>	48: <b>B</b>
49: <b>A</b>	50: <b>A</b>	51: <b>D</b>	52: <b>B</b>
53: <b>C</b>	54: <b>A</b>	55: <b>C</b>	56: <b>D</b>
57: <b>D</b>	58: <b>C</b>	59: <b>B</b>	60: <b>A</b>
61: <b>D</b>	62: <b>D</b>	63: <b>A</b>	64: <b>C</b>
65: <b>A</b>	66: <b>D</b>	67: <b>D</b>	68: <b>A</b>
69: <b>B</b>	70: <b>A</b>		

# Exam simulation

Exam BPL Gas - Balloon Pilot License - Principles of Flight (Balloon)



QuizVds.it

## Response form

Use this form to mark your answers

01: _____	02: _____	03: _____	04: _____
05: _____	06: _____	07: _____	08: _____
09: _____	10: _____	11: _____	12: _____
13: _____	14: _____	15: _____	16: _____
17: _____	18: _____	19: _____	20: _____
21: _____	22: _____	23: _____	24: _____
25: _____	26: _____	27: _____	28: _____
29: _____	30: _____	31: _____	32: _____
33: _____	34: _____	35: _____	36: _____
37: _____	38: _____	39: _____	40: _____
41: _____	42: _____	43: _____	44: _____
45: _____	46: _____	47: _____	48: _____
49: _____	50: _____	51: _____	52: _____
53: _____	54: _____	55: _____	56: _____
57: _____	58: _____	59: _____	60: _____
61: _____	62: _____	63: _____	64: _____
65: _____	66: _____	67: _____	68: _____
69: _____	70: _____		