

Exam simulation

Quiz BPL Hot Air - Balloon Pilot License - Principles of Flight (Balloon)



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STUDENT NAME:

DATE AND TIME:

01. What has to be expected when diving into an inversion layer from above?

- a) Rate of descent increases
- b) Rate of descent decreases.
- c) Sudden drop onto the ground.
- d) Uncontrollable oscillation of the basket.

02. Which are the different parts of the Aeronautical Information Publication (AIP)?

- a) GEN ENR AD
- b) GEN MET RAC
- c) GEN COM MET
- d) GEN AGA COM

03. Which transponder code indicates a loss of radio communication?

- a) 7700
- b) 7600
- c) 7000
- d) 2000

04. What information is provided in the part "AD" of the AIP?

- a) Access restrictions for airfields, passenger controls, requirements for pilots, license samples and validity periods
- b) Table of content, classification of airfields with corresponding maps, approach charts, taxi charts
- c) Warnings for aviation, ATS airspaces and routes, restricted and dangerous airspaces.
- d) Map icons, list of radio nav aids, time for sunrise and sunset, airport fees, air traffic control fees

05. What has to be expected during descent above a heated water surface?

- a) The rate of descent increases.
- b) The rate of descent decreases
- c) The horizontal speed increases.
- d) The horizontal speed decreases.

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06. The angle between compass north and magnetic north is called...

- a) Inclination.
- b) WCA.
- c) Deviation.
- d) Variation.

07. Given: TC: 183°; WCA: +011°; MH: 198°; CH: 200° What are the TH and the DEV? (2,00 P.)

- a) TH: 194°. DEV: +002°.
- b) TH: 172°. DEV: +002°
- c) TH: 172°. DEV: -002°.
- d) TH: 194°. DEV: -002°.

08. Which of the following statements is correct?

- a) At higher altitude, sink rate in case of cooling is increased due to less drag by less density.
- b) At higher altitude, sink rate by cooling is not increased because due to low density the mass inside the hull is also less.
- c) Higher drag at higher altitude prevents increased sink rate in case of cooling.
- d) Maximum sink rate must be equal at all altitudes as prescribed by design regulations.

09. Which wind system may be dangerous for balloon rides in the Alps?

- a) Bora
- b) Scirocco
- c) Mistra
- d) Foehn

10. At high altitude, the complete heating system of a hot-air balloon fails. What maximum rate of descent has to be expected upon reaching ground?

- a) Approximatley 2.5 m/s
- b) Approximatley 4.5 m/s
- c) Approximatley 6.5 m/s
- d) Approximatley 2.5 m/s

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11. What does a cloud coverage of "BKN" mean in a METAR weather report?

- a) 5 to 7 eighths
- b) 1 to 2 eighths
- c) 8 eighths
- d) 3 to 4 eighths

12. A vertical speed indicator measures the difference between...

- a) Instantaneous static pressure and previous static pressure.
- b) Dynamic pressure and total pressure.
- c) Total pressure and static pressure.
- d) Instantaneous total pressure and previous total pressure.

13. Who provides search and rescue service?

- a) Only military organisations
- b) Both military and civil organisations
- c) Only civil organisations
- d) Only civil organisations

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

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

15. Which is the purpose of the altimeter subscale?

- a) To reference the altimeter reading to a predetermined level such as mean sea level, aerodrome level or pressure level 1013.25 hPa
- b) To correct the altimeter reading for system errors
- c) To set the reference level for the altitude decoder of the transponder
- d) To adjust the altimeter reading for non-standard temperature

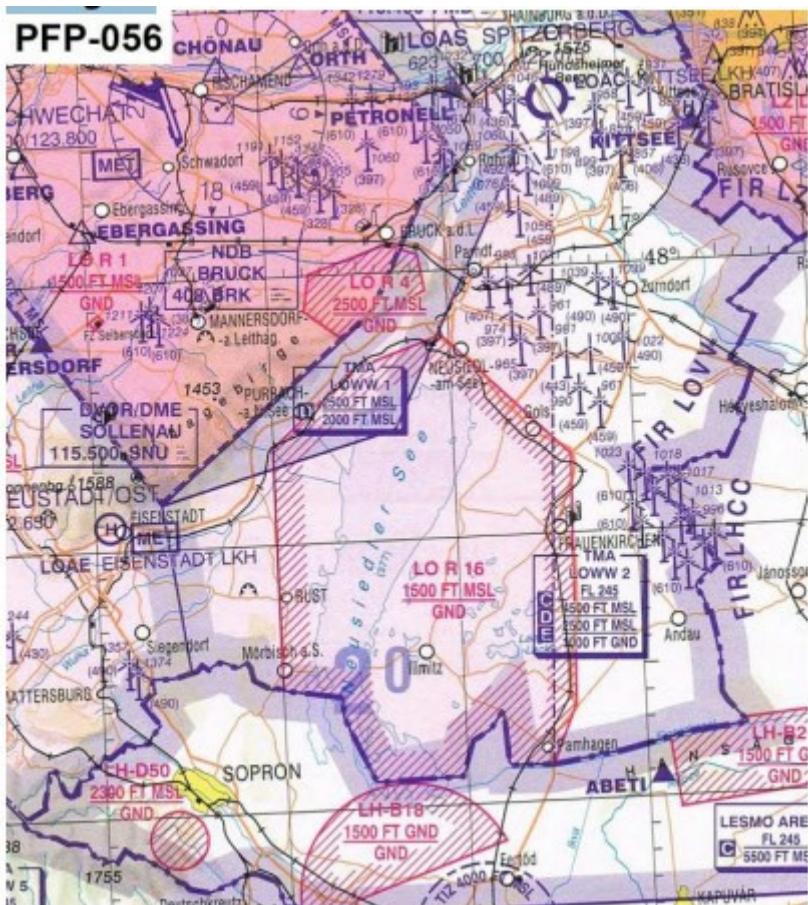
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16. The upper limit of LO R 16 equals... See annex (PFP-056) Siehe Anlage 2



- a) FL150.
- b) 1.500 ft GND.
- c) 1 500 ft MSL.
- d) 1 500 m MSL.

17. With regard to gases, which statement is correct?

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

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18. The term 'isogonal' or 'isogonic line' is defined as a line on an aeronautical chart, connecting all points with the same value of...

- a) Variation.
- b) Inclination.
- c) Heading.
- d) Deviation

19. What is the meaning of an area marked as "TMZ"?

- a) Touring Motorglider Zone
- b) Traffic Management Zone
- c) Transponder Mandatory Zone
- d) Transportation Management Zone

20. The standard state of gases refers to which temperature?

- a) 0° C
- b) 15° C
- c) 25° C
- d) 5° C

21. How can you obtain meteorological information concerning airports during a crosscountry flight?

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

22. At which conditions does the arm blower have the highest efficiency?

- a) With as small distance to the balloon opening as possible.
- b) By evenly swiveling for better air spreading.
- c) By completely filling the balloon opening with the air beam.
- d) By placing the blower inside the hull.

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23. What has to be considered before a balloon ride across water surfaces?

- a) Continuous radio communication has to be established with air traffic control
- b) A transponder has to be installed and carried aboard
- c) A flight plan with detailed routing has to be filed.
- d) For all people inside the basket life jackets have to be carried aboard

24. (For this question, please use annex PFP-062) According ICAO, what symbol indicates a civil airport (not international airport) with paved runway? Siehe Anlage 6

- A
- B
- C
- D

PFP-062

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

25. What is the meaning of the abbreviation "TRA"?

- a) Temporary Radar Routing Area
- b) Temporary Reserved Airspace
- c) Terminal Area
- d) Transponder Area

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26. 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

27. The average decrease of blood alcohol level for an adult in one hour is approximately...

- a) 0.3 percent.
- b) 0.03 percent.
- c) 0.01 percent
- d) 0.1 percent.

28. What are the air masses that Central Europe is mainly influenced by?

- a) Equatorial and tropical warm air
- b) Polar cold air and tropical warm air
- c) Tropical and arctic cold air
- d) Arctic and polar cold air

29. What must be considered for cross-border flights?

- a) Transmission of hazard reports
- b) Approved exceptions
- c) Regular location messages
- d) Requires flight plans

30. A pilot can contact FIS (flight information service)...

- a) Via internet.
- b) Via radio communication.
- c) By a personal visit.
- d) Via telephone.

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31. 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

32. Assume two arbitrary points A and B on the same parallel of latitude, but not on the equator. Point A is located on 010°E and point B on 020°E. The rumble line distance between A and B is always...

- a) More than 300 NM.
- b) Less than 300 NM.
- c) Less than 600 NM.
- d) More than 600 NM

33. 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

34. Regarding the communication model, how can the use of the same code during radio communication be ensured?

- a) By the use of proper headsets
- b) By a particular frequency allocation
- c) By the use of radio phraseology
- d) By using radios certified for aviation use only

35. 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

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36. The dynamic lift created by airflow across the top of the envelope of a balloon on the ground is referred to as?

- a) Lower lift
- b) Upper lift
- c) False lift
- d) Anti-ballast

37. Which statement is correct with regard to the short-term memory?

- a) It can store 5 (± 2) items for 1 to 2 minutes
- b) It can store 3 (± 1) items for 5 to 10 seconds
- c) It can store 7 (± 2) items for 10 to 20 seconds
- d) It can store 10 (± 5) items for 30 to 60 seconds

38. A flight is called a "visual flight", if the...

- a) Flight is conducted in visual meteorological conditions.
- b) Visibility in flight is more than 8 km
- c) Flight is conducted under visual flight rules.
- d) Visibility in flight is more than 5 km.

39. The main blast valve is located where?

- a) At the main cylinder
- b) At the burner
- c) At the hull equator
- d) At the upper hull part

40. Which abbreviation is used for the term "abeam"?

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

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41. The rotational axis of the Earth runs through the...

- a) Geographic North Pole and on the geographic South Pole.
- b) Magnetic north pole and on the magnetic south pole.
- c) Geographic North Pole and on the magnetic south pole
- d) Magnetic north pole and on the geographic South Pole.

42. Which transponder code should be set during a radio failure without any request?

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

43. Which validity does the "Certificate of Airworthiness" have?

- a) 12 years
- b) 12 months
- c) Unlimited
- d) 6 months

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

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

45. The carrying ropes of a hot-air balloon are made up from:

- a) Manila rope
- b) Stainless steel
- c) Copper
- d) Duralum

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46. What is the great circle distance between two points A and B on the equator when the difference between the two associated meridians is exactly one degree of longitude?

- a) 60 NM
- b) 216 NM
- c) 400 NM
- d) 120 NM

47. 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

48. What is the purpose of the semi-circular rule?

- a) To avoid collisions by suspending turning manoeuvres
- b) To fly without a filed flight plan in prescribed zones published in the AIP
- c) To avoid collisions by reducing the probability of opposing traffic at the same altitude
- d) To allow safe climbing or descending in a holding pattern

49. 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

50. What is the primary purpose of an aircraft accident investigation?

- a) To Determine the guilty party and draw legal consequences
- b) To identify the reasons and work out safety recommendations
- c) To clarify questions of liability within the meaning of compensation for passengers
- d) To work for the public prosecutor and help to follow-up flight accidents

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51. What is the percentage of oxygen in the atmosphere at 6000 ft?

- a) 78 %
- b) 21 %
- c) 12 %
- d) 18.9 %

52. 5500 m equal...

- a) 7500 ft.
- b) 18000 ft.
- c) 10000 ft.
- d) 30000 ft

53. The shown NOTAM is valid until... A) 1024/13 A) LOWW B) 1305211200 C) 1305211400 E) STOCKERAU VOR STO 113.00 UNSERVICEABLE.

- a) 21/05/2014 13:00 UTC.
- b) 13/05/2013 12:00 UTC.
- c) 13/10/2013 00:00 UTC.
- d) 13/10/2013 00:00 UTC.

54. What is the call sign of the aerodrome control?

- a) Ground
- b) Tower
- c) Airfield
- d) Control

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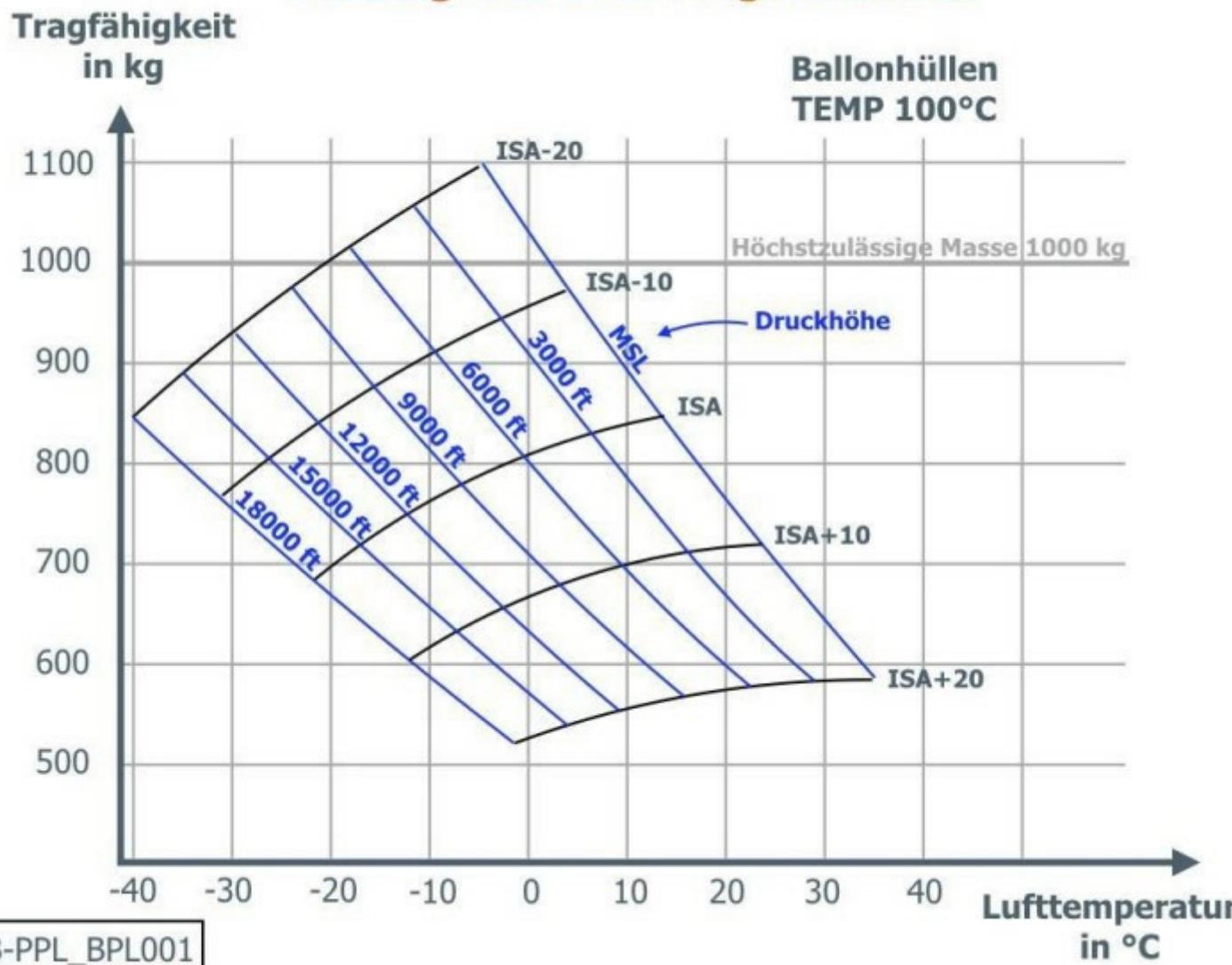
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55. Given the following masses: Empty mass 260 kg Instruments 20 kg per gas container (full): 30 kg per person: 80 kg Assuming temperature ISA+10, how many persons may be carried in the basket at maximum, if the balloon with 4 gas containers has to climb up to pressure altitude 12.000 ft ? (use attachment ECQB-PPL_BPL001) Siehe Anlage 1

Auszug aus dem Flughandbuch



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

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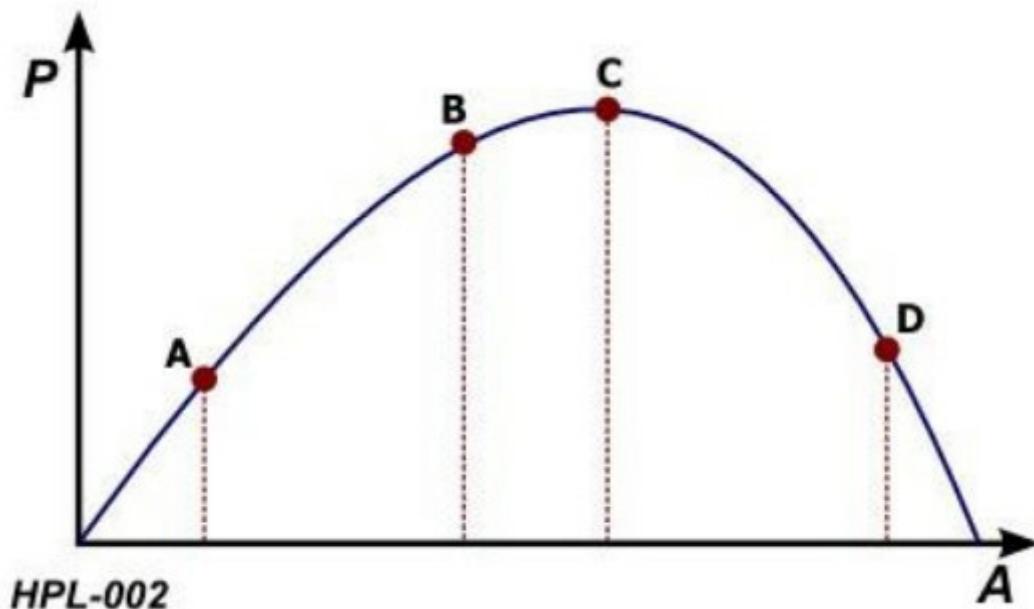
56. The ratio between air pressures at different heights is referred to as:

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

57. A pilot license issued in accordance with ICAO Annex 1 is valid in...

- a) The country where the license was acquired.
- b) All ICAO countries.
- c) The country where the license was issued.
- d) Those countries that have accepted this license on application.

**58. At which point in the diagram will a pilot find himself to be overstrained? See figure (HPL-002) P = Performance
A = Arousal / Stress Siehe Anlage 1**



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

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59. A cross-country flight is made using the ICAO 1 : 500.000 aeronautical chart. An overflight crosscheck shows that a distance of 4 cm in the chart has been passed within 12 minutes. After how many more minutes, the overflight of another waypoint at a chart distance of additional 6 cm can be expected?

- a) 9 min
- b) 6 min.
- c) 12 min
- d) 18 min.

60. What is the consequence if the pressure at the burner valve is lower than 0.28 MPa (lower than 2.8 bar)?

- a) Take-off is prohibited.
- b) The gas container should be heated by the flame.
- c) The heating system may be damaged.
- d) The pressure in the gas container may be increased by use of acetylene.

61. What is the meaning of the phrase "Roger"?

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

62. While overflying a waypoint, it is stated that a distance of 2 NM has been taken 10 min. What will be the expected time of endurance for the complete distance of 18 NM?

- a) 60 min.
- b) 12 min.
- c) 180 min.
- d) 90 min.

63. What does the abbreviation "FIS" stand for?

- a) Flashing information service
- b) Flight information system
- c) Flashing information system
- d) Flight information service

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64. In what situation is it appropriate to set the transponder code 7600?

- a) Hijacking
- b) Loss of radio
- c) Flight into clouds
- d) Emergency

65. The dry adiabatic lapse rate has a value of...

- a) 1,0° C / 100 m.
- b) 0,6° C / 100 m.
- c) 0,65° C / 100 m.
- d) 2° / 1000 ft.

66. The standard state of gases refers to which temperature?

- a) 15° C
- b) 25° C
- c) 0° C
- d) 5° C

67. What is the function of the red blood cells (erythrocytes)?

- a) Oxygen transport
- b) Immune defense
- c) Blood sugar regulation
- d) Blood coagulation

68. During a flight at FL 80, the altimeter setting has to be...

- a) Local QFE
- b) 1013.25 hPa
- c) 1030.25 hPa
- d) Local QNH.

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69. Under which conditions false readouts are possible on hull thermometers using radio communication from sensor to indicator panel?

- a) When radio messages are received
- b) When the sensor battery is almost empty
- c) When the hull temperature exceeds 110 °C
- d) When there is no intervisibility to temperature sensor

70. In case of a water landing, when should the life jackets be inflated?

- a) After landing, still in the basket, if leaving the basket has to be expected.
- b) During cruise over water.
- c) After leaving the basket.
- d) Before touchdown on water surface.

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Response Scheme

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

01: **B**

02: **A**

03: **B**

04: **B**

05: **A**

06: **C**

07: **D**

08: **A**

09: **D**

10: **C**

11: **A**

12: **A**

13: **B**

14: **C**

15: **A**

16: **C**

17: **B**

18: **A**

19: **C**

20: **C**

21: **B**

22: **C**

23: **D**

24: **D**

25: **B**

26: **B**

27: **C**

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29: **D**

30: **B**

31: **A**

32: **C**

33: **A**

34: **C**

35: **A**

36: **C**

37: **C**

38: **C**

39: **B**

40: **C**

41: **A**

42: **D**

43: **C**

44: **B**

45: **B**

46: **A**

47: **C**

48: **C**

49: **D**

50: **B**

51: **B**

52: **B**

53: **D**

54: **B**

55: **A**

56: **D**

57: **B**

58: **B**

59: **D**

60: **A**

61: **D**

62: **D**

63: **D**

64: **B**

65: **A**

66: **B**

67: **A**

68: **B**

69: **B**

70: **C**

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Response form

Use this form to mark your answers

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