

Exam simulation

Quiz BPL Hot Air - Balloon Pilot License - Human Performance and limitations



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STUDENT NAME:

DATE AND TIME:

01. Before take-off, the balloon pilot realises that the maximum take-off mass has been exceeded by 5%. What has to be done?

- a) The load has to be reduced to maximum take-off mass
- b) During take-off, special care has to be taken for obstacles
- c) With exceeding up to 5%, normal take-off can be performed
- d) Take-off has to be approved by the airfield manager on duty

02. What has to be done in case the balloon shows a strong tendency to climb while crossing thermals?

- a) It must be heated continuously to maintain hull temperature
- b) It must be heated stronger than usual
- c) The burner has to be cut off immediately
- d) The pull-rope has to be actuated immediately

03. 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

04. Aerostatic lift, amongst other factors, depends on...

- a) Shape of the envelope
- b) On the speed
- c) Balloon mass
- d) Air density

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05. 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

06. 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

07. What effect has the elevation above MSL of an airfield on the carrying force and maximum take-off mass of a balloon?

- a) The higher the elevation, the lower the carrying force
- b) The lower the elevation, the lower the maximum take-off mass
- c) The lower the elevation, the higher the maximum take-off mass
- d) The higher the elevation, the greater the carrying force

08. Which transponder code has to be set unrequested during an emergency?

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

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09. (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

10. Given: TC: 183°; WCA: +011°; MH: 198°; CH: 200° What are the TH and the DEV?

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

11. 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 rhumb 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

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12. What difference will be experienced during take-off in presence of a strong surface inversion, compared to a take-off with decreasing temperature with height?

- a) During climb through an inversion, less ballast must be released and/or less heating is required
- b) During climb through an inversion, less ballast must be released and/or more heating is required
- c) During climb through an inversion, more ballast must be released and/or more heating is required
- d) During climb through an inversion, more ballast must be released and/or less heating is required

13. A pilot burner which is fed by the gas phase, works by which principle?

- a) Electrostatic principle
- b) Bunsen principle
- c) Aerostatic principle
- d) Aerodynamic principle

14. Air consists of oxygen, nitrogen and other gases. What is the approximate percentage of other gases?

- a) 1 %
- b) 21 %
- c) 0.1 %
- d) 78 %

15. The term 'civil twilight' is defined as...

- a) The period of time before sunrise or after sunset where the midpoint of the sun disk is 12 degrees or less below the true horizon
- b) The period of time before sunrise or after sunset where the midpoint of the sun disk is 6 degrees or less below the apparent horizon
- c) The period of time before sunrise or after sunset where the midpoint of the sun disk is 6 degrees or less below the true horizon
- d) The period of time before sunrise or after sunset where the midpoint of the sun disk is 12 degrees or less below the apparent horizon

16. What is the meaning of the abbreviation "AIREP"?

- a) Aeronautical instrument requirement report
- b) Aircraft report
- c) Automatic identification report
- d) Aeronautical information report

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17. In what case is visibility transmitted in meters?

- a) Up to 10 km
- b) Greater than 10 km
- c) Greater than 5 km
- d) Up to 5 km

18. What action has to be taken by the pilot of a hot-air balloon in case of fire on the ground? First action is to ...

- a) Make an emergency call via radio
- b) Leave from the area surrounding the burner
- c) Close the valves of the gas containers
- d) Engage the fire extinguishers

19. What is indicated by a yellow arc on the hull thermometer with an analog scale?

- a) Maximum permissible values
- b) The cautious area
- c) Readability improvement
- d) The normal operating area

20. What is the percentage of nitrogen in the atmosphere?

- a) 0.1 %
- b) 21 %
- c) 78 %
- d) 1 %

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

- a) It allows pressure equalization during cruise at high altitude
- b) To indicate the volumetric filling limit
- c) It prevents air from entering the burner system
- d) For venting the liquid gas container bottle

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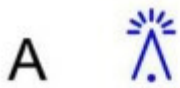


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22. What information can be obtained from satellite images?

- a) Flight visibility, ground visibility, and ground contact
- b) Overview of cloud covers and front lines
- c) Turbulence and icing
- d) Temperature and dew point of environmental air

23. (For this question, please use annex PFP-061) According ICAO, what symbol indicates a group of unlighted obstacles?



PFP-061

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

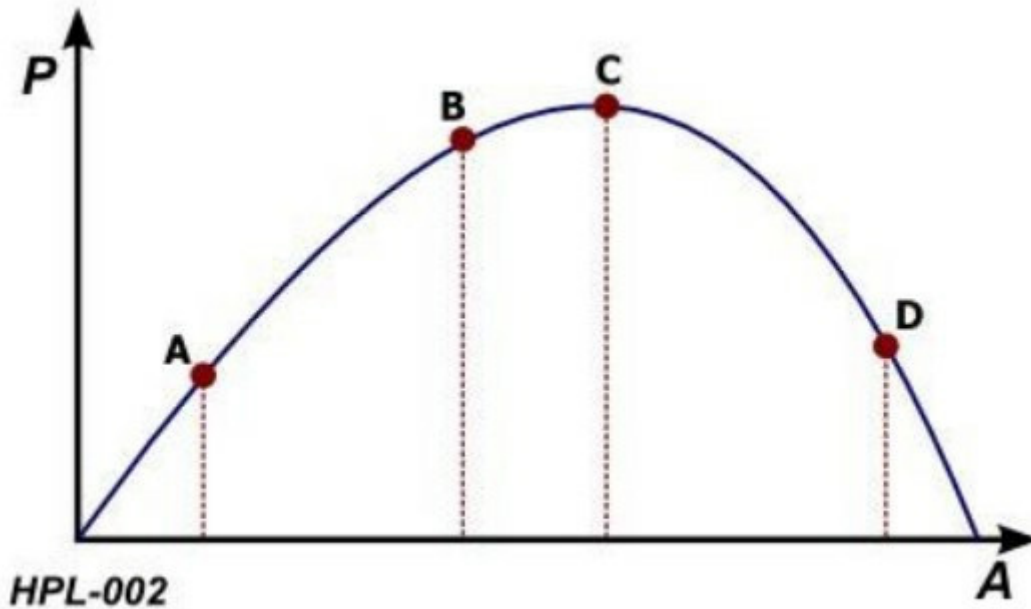
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24. The ideal level of arousal is at which point in the diagram? See figure (HPL-002) P = Performance A = Arousal / Stress



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

25. A heading of 285 degrees is correctly transmitted as...

- a) Two hundred eighty-five
- b) Two eight five
- c) Two eight five hundred
- d) Two hundred eight five

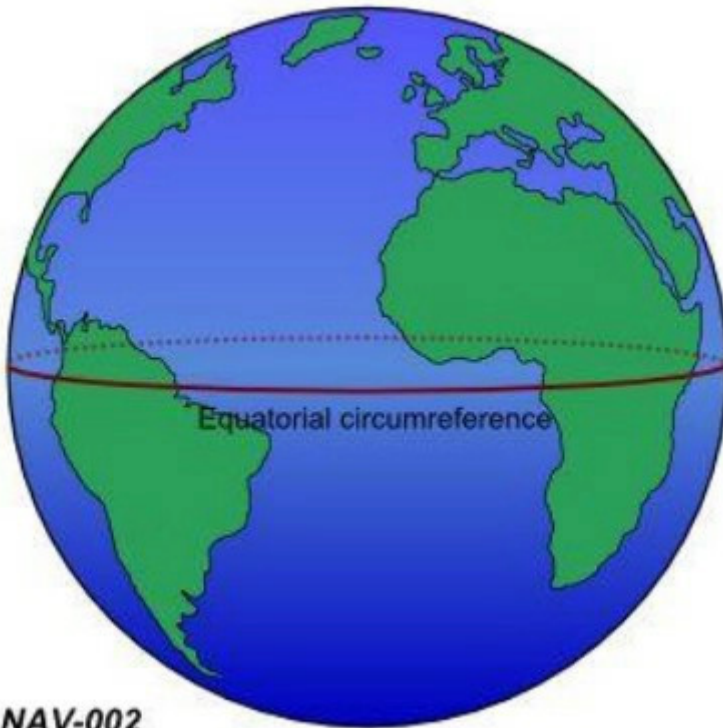
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26. The circumference of the Earth at the equator is approximately... See figure (NAV-002)



- a) 40000 NM
- b) 12800 km
- c) 10800 km
- d) 21600 NM

27. 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

28. In what different ways can a risk be handled appropriately?

- a) Avoid, ignore, palliate, reduce
- b) Extrude, avoid, palliate, transfer
- c) Ignore, accept, transfer, extrude
- d) Avoid, reduce, transfer, accept

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29. Which abbreviation is used for the term "visual flight rules"?

- a) VFS
- b) VRU
- c) VMC
- d) VFR

30. Which area could be crossed with certain restrictions?

- a) Restricted area
- b) No-fly zone
- c) Prohibited area
- d) Dangerous area

31. An aircraft travels 100 km in 56 minutes. The ground speed (GS) equals...

- a) 93 kt
- b) 198 kt
- c) 107 km/h
- d) 58 km/h

32. What wind is reported as 225/15 ?

- a) North-east wind with 15 km/h
- b) South-west wind with 15 km/h
- c) South-west wind with 15 kt
- d) North-east wind with 15 kt

33. 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

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34. The minimum flight visibility at 5000 ft MSL in airspace B for VFR flights is...

- a) 5000 m
- b) 3000 m
- c) 1500 m
- d) 8000 m

35. What ground features should preferably be used for orientation during visual flight?

- a) Power lines
- b) Rivers, railroads, highways
- c) Border lines
- d) Farm tracks and creeks

36. How is an air mass described when moving to Central Europe via the Russian continent during winter?

- a) Continental polar air
- b) Continental tropical air
- c) Maritime tropical air
- d) Maritime polar air

37. What is the meaning of the abbreviation "ARC"?

- a) Airspace Restriction Criteria
- b) Airworthiness Recurring Control
- c) Airworthiness Review Certificate
- d) Airspace Rulemaking Committee

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

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

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39. Which of the following symptoms may indicate hypoxia?

- a) Blue marks all over the body
- b) Blue discolouration of lips and fingernails
- c) Muscle cramps in the upper body area
- d) Joint pain in knees and feet

40. What chart shows areas of precipitation?

- a) Radar picture
- b) GAFOR
- c) Wind chart
- d) Satellite picture

41. What are primary criteria for selecting a landing site? 1. Obstacle situation 2. Elevation of the site 3. Strength of surface wind

- a) 2 and 3
- b) 1, 2 and 3
- c) 1 and 2
- d) 1 and 3

42. 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

43. A vertical speed indicator connected to a too big equalizing tank results in...

- a) Indication too high
- b) No indication
- c) Indication too low
- d) Mechanical overload

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44. 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)

45. Which phrase is used by a pilot when he wants to fly through controlled airspace?

- a) Apply
- b) Want
- c) Request
- d) Would like

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

- a) 1.225 g/m³
- b) 1225 kg/m³
- c) 12.25 kg/m³
- d) 1.225 kg/m³

47. What is the gas composition of "air"?

- a) Oxygen 78 % Water vapour 21 % Nitrogen 1 %
- b) Oxygen 21 % Water vapour 78 % Noble gases / carbon dioxide 1 %
- c) Nitrogen 21 % Oxygen 78 % Noble gases / carbon dioxide 1 %
- d) Oxygen 21 % Nitrogen 78 % Noble gases / carbon dioxide 1 %

48. Which weather phenomenon is typically associated with wind shear?

- a) Invernal warm front
- b) Stable high pressure areas
- c) Thunderstorms
- d) Fog

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49. 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

50. The stretch-out of the envelope of a hot-air balloon should be made:

- a) To the lee side of the basket
- b) To the windward side of the basket
- c) To the sunward side of the basket
- d) To the sun-averted side of the basket

51. In what case is the pilot allowed to abbreviate the call sign of his aircraft?

- a) After the ground station has used the abbreviation
- b) Within controlled airspace
- c) If there is little traffic in the traffic circuit
- d) After passing the first reporting point

52. 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

53. What cause may result in a reduction of volume of a free balloon?

- a) Reduction in mass
- b) A gust
- c) Cooling of environment air
- d) Increase in hull temperature

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54. Which altitude is displayed on the altimeter when set to a specific QFE?

- a) Altitude in relation to mean sea level
- b) Altitude in relation to the highest elevation within 10 km
- c) Altitude in relation to the 1013.25 hPa datum
- d) Altitude in relation to the air pressure at the reference airfield

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

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

56. What is the meaning of the phrase "Correction"?

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

57. 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

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

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

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59. During setup of a hot-air balloon, the hull is damaged with a hole with a size of 1.50 m x 1.00 m. Is Take-Off permitted?

- a) Yes, if all passengers agree
- b) Yes, if permitted by the operating handbook
- c) No, the hull has to be repaired first
- d) Yes, if loading is reduced

60. What phrase is used by a pilot to inform the tower about a go-around?

- a) Approach canceled
- b) Going around
- c) No landing
- d) Pulling up

61. 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

62. The aerostatic lift corresponds to which force?

- a) The weight of the balloon less ballast
- b) The dynamic force due to airstream across the top of the hull
- c) The weight of the displaced air
- d) The drag due to airstream around the balloon envelope

63. 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

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64. What kind of information should be included in an urgency message?

- a) Nature of problem or observation, important information for support, departure aerodrome, information about position, heading and altitude
- b) Intended routing, important information for support, intentions of the pilot, departure aerodrome, destination aerodrome, heading and altitude
- c) Intended routing, important information for support, intentions of the pilot, information about position, departure aerodrome, heading and altitude
- d) Nature of problem or observation, important information for support, intentions of the pilot, information about position, heading and altitude

65. What amount of ignitable mixture can be made from 1 L (0.001 m³) liquid propane gas?

- a) 0.38 m³
- b) 0.26 m³
- c) 12 m³
- d) 1.2 m³

66. Regularity messages are messages...

- a) Concerning aircraft and their passengers which face a grave and imminent threat and require immediate assistance
- b) Concerning the safety of an aircraft, a watercraft or some other vehicle or person in sight
- c) Sent by an aircraft operating agency or an aircraft of immediate concern to an aircraft in flight
- d) Concerning the operation or maintenance of facilities essential for the safety or regularity of aircraft operation

67. 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

68. 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

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69. Before buildup, the buildup team has to be informed about correct behaviour at sudden critical situations how?

- a) Only at gusty winds
- b) At least two days before
- c) By the balloon pilot
- d) Twice

70. In which situations should a pilot use blind transmissions?

- a) When a transmission containing important navigational or technical information is to be sent to several stations at the same time
- b) When a pilot has flown into cloud or fog unintentionally and therefore would like to request navigational assistance from a ground unit
- c) When no radio communication can be established with the appropriate aeronautical station, but when evidence exists that transmissions are received at that ground unit
- d) When the traffic situation at an airport allows the transmission of information which does not need to be acknowledged by the ground station

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Response Scheme

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

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

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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: _____		