Quiz BPL Hot Air - Balloon Pilot License - Air Law



STUDENT NAME:	DATE AND TIME:

01. The boiling point of propane gas at atmospheric conditions is:

a) .+ 5 °C

b) .- 42 °C

c) .- 23 °C

d) 0 °C

02. Which of the gases stated below is NOT made up from hydrocarbons?

- a) Propane
- b) Butane
- c) Methane
- d) Hydrogen

03. What does a readability of 2 indicate?

- a) The transmission is readable but with difficulty
- b) The transmission is perfectly readable
- c) The transmission is unreadable
- d) The transmission is readable now and then

04. 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.

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05. What should be considered regarding a scheduled flight over water, when land cannot be reached in case of an

emergency landing?
a) Contact to the nearest ATC shall consist during the whole flight
b) The flight plan has to contain the exact waypoints
c) For all passengers there must be life jackets or lifeboats present
d) Transponder code 7600 has to be set during the whole flight
06. 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
07. What is the function of the red blood cells (erythrocytes)?
a) Oxygen transport
b) Immune defense
c) Blood sugar regulation
d) Blood coagulation
08. 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.
09. Visual illusions are mostly caused by
a) Misinterpretation of the brain.
b) Binocular vision.

c) Rapid eye movements. d) Colour blindness.

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10. The vertical speed indicator measures the difference of pressure between...

- a) The present dynamic pressure and the static pressure of a previous moment.
- b) The present total pressure and the total pressure of a previous moment.
- c) The present dynamic pressure and the dynamic pressure of a previous moment.
- d) The present static pressure and the static pressure of a previous moment.

11. 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.

12. 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

13. A wind shear is...

- a) A meteorological downslope wind phenomenon in the alps.
- b) A wind speed change of more than 15 kt.
- c) A vertical or horizontal change of wind speed and wind direction.
- d) A slow increase of the wind speed in altitudes above 13000 ft.

14. What is the minimum flight visibility in airspace "C" below FL 100 for an aircraft operating under VFR?

- a) 5 km
- b) 1.5 km
- c) 10 km
- d) 8 km

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15. What phrase is used by a pilot if a transmission is to be answered with "yes"?

- a) Affirmative
- b) Affirm
- c) Roger
- d) Yes

16. Electronic devices on board of an aeroplane have influence on the...

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

17. What ground features should preferrably be used for orientation during visual flight?

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

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

- a) What is the meaning of the abbreviation "AIREP"?
- b) Aircraft report
- c) Automatic identification report
- d) Aeronautical information report

19. 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

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20. What does the abbreviation "H24" stand for?

- a) 24 h service
- b) No specific opening times
- c) Sunrise to sunset
- d) Sunset to sunrise

21. Doubling the pressure of a dry gas at constant temperature results in a change of the volume to:

- a) Double the previous value.
- b) Half the previous value.
- c) Four times the previous value.
- d) A quarter of the previous value.

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

- a) The burner
- b) The burner cage.
- c) To the Scoop.
- d) The Nomex apron.

23. Which of the following documents have to be on board for an international flight? a) Certificate of aircraft registration b) Certificate of airworthiness c) Airworthiness review certificate d) EASA Form-1 e) Airplane logbook f) Appropriate papers for every crew member g) Technical logbook

a) A, b, c, e, f

b) D, f, g

c) B, c, d, e, f, g

d) A, b, e, g

24. 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

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25. A transponder with the ability to send the current pressure level is a...

- a) Mode C or S transponder.
- b) Mode A transponder.
- c) Transponder approved for airspace "B".
- d) Pressure-decoder.

26. 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 higherthe maximum take-off mass.
- d) The higher the elevation, the greater the carrying force.

27. 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

28. Above the friction layer, with a prevailing pressure gradient, the wind direction is...

- a) At an angle of 30° to the isobars towards low pressure.
- b) Perpendicular to the isobars.
- c) Parallel to the isobars.
- d) Perpendicular to the isohypses.

29. Which of the following messages has the highest priority?

- a) Turn left
- b) Request QDM
- c) QNH 1013
- d) Wind 300 degrees, 5 knots

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30. What is the best combination of traits with respect to the individual attitude and behaviour for a pilot?

- a) Extroverted stable
- b) Introverted unstable
- c) Introverted stable
- d) Extroverted unstable

31. Vienna (LOWW) is located at 016° 34'E, Salzburg (LOWS) at 013° 00'E. The latitude of both positions can be considered as equal. What is the difference of sunrise and sunset times, expressed in UTC, between Wien and Salzburg? (2,00 P.)

- a) In Vienna the sunrise and sunset are about 4 minutes later than in Salzburg
- b) In Vienna the sunrise and sunset are about 14 minutes earlier than in Salzburg
- c) In Vienna the sunrise is 4 minutes later and sunset is 4 minutes earlier than in Salzburg
- d) In Vienna the sunrise is 14 minutes earlier and sunset is 14 minutes later than in Salzburg

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

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

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

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

34. The electronic remote hull thermometer of a hot-air balloon is operating by which principle?

- a) Venturi principle
- b) Boyle principle.
- c) Resistance- / Semiconductor principle.
- d) Bernoulli principle.

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35.	The	standard	state of	gases	refers	to wh	nich	temperature?	?
-----	-----	----------	----------	-------	--------	-------	------	--------------	---

a) 15° C

- b) 25° C
- c) 0° C
- d) 5° C

36. What action has to be considered by the pilot of a hot-air balloon with a double-burner installation, in case one burner valve fails?

- a) An emergency call should be made.
- b) Both burner valves have to be shut down immediately.
- c) The ride has to be stopped immediately.
- d) The ride can be continued by use of the remaining burner.

37. 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

38. 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)

39. At which altitude is the atmospheric pressure approximately half the MSL value (1013 hPa)?

- a) 5000 ft
- b) 18000 ft
- c) 22000 ft
- d) 10000 ft

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40. What wind conditions should be expected in the vicinity of showers or thunderstorms?

_		
_ \	Steady wind from direction of shower.	
a	Steady wind from direction of snower	
u,	Oloddy Willia Holli alloolloll of ollowor.	

- b) Steady wind into direction of shower.
- b) Steady will into direction of shower.
- c) Strong gust from variable directions
- d) Calm winds during passage of a shower.

41. The shortest distance between two	points on Earth is re	presented by a part of
---------------------------------------	-----------------------	------------------------

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

42. While overflying a waypoint, it is stated that a distance of 3 NM has been taken 10 min. What will be the expected time of endurance for the remaining distance of 18 NM?

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

43. With regard to thunderstorms, strong up- and downdrafts appear during the...

- a) Mature stage.
- b) Dissipating stage.
- c) Thunderstorm stage.
- d) Initial stage.

44. What weather conditions can be expected in high pressure areas during summer?

- a) Changing weather with passing of frontal lines
- b) Squall lines and thunderstorms
- c) Calm winds and widespread areas with high fog
- d) Calm weather and cloud dissipation, few high Cu

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45. What clouds and weather may result from an humid and instable air mass, that is pushed against a chain of mountains by the predominant wind and forced to rise?

- a) Embedded CB with thunderstorms and showers of hail and/or rain
- b) Overcast low stratus (high fog) with no precipitation.
- c) Smooth, unstructured NS cloud with light drizzle or snow (during winter).
- d) Thin Altostratus and Cirrostratus clouds with light and steady precipitation.

46. Which type of cloud is associated with prolonged rain?

- a) Light and heavy precipitation.
- b) Rain and showers of rain.
- c) Showers of snow and rain.
- d) Prolonged rain and continuous rain.

47. Cold air inflow in high tropospheric layers may result in...

- a) Stabilisation and calm weather
- b) Showers and thunderstorms.
- c) Calm weather and cloud dissipation.
- d) Frontal weather.

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48. What cloud type does the picture show? See figure (MET-004). Siehe Anlage 3



- a) Cirrus
- b) Altocumulus
- c) Stratus
- d) Cumulus

49. 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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50. What is the approximate speed of electromagnetic wave propagation?

- a) 300000 m/s
- b) 123000 m/s
- c) 300000 km/s
- d) 123000 km/s

51. The majority of aviation accidents are caused by...

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

52. Which instrument can be affected by the hysteresis error?

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

53. During buildup of a hot-air balloon, who has to be equipped with tight, flame resistant gloves and clothing covering all body parts?

- a) Only the balloon pilot
- b) Balloon pilot, buildup team and spectators
- c) Only the buildup team
- d) The balloon pilot and the buildup team

54. 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.

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55. 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 intervisiblity to temperature sensor

56. On summerdays with calm winds, the balloon pilot has to expect:

- a) With a cold air pool on the ground.
- b) With wind shear.
- c) With strongly heated surface layers.
- d) With a pronounced ground inversion

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

- a) Maximium permissable values
- b) The cautious area
- c) Readbility improvement
- d) The normal operating area

58. What is the minimum flight visibility in airspace "C" for an aircraft operating under VFR at FL110?

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

59. What is the distance between the parallels of latitude 48°N and 49°N along a meridian line?

- a) 10 NM
- b) 111 NM
- c) 60 NM
- d) 1 NM

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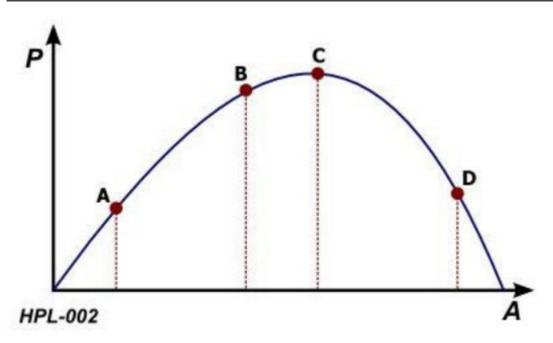
60. Before buildup, the buildup team has to be informed about correct behaviour at sudden critical situations how?

ov. Before ballaup, the ballaup team has to be informed about borrest beliavious at badden situations now
a) Only at gusty winds
b) At least zwo days before
c) By the balloon pilot
d) Twice
61. The hull fabric of a hot-air balloon undergoes the most continuous thermal stress in which area?
a) In the apron area.
b) In the lower third.
c) At the equator.
d) At the top area.
62. At equilibrium the inner overpressure of a free balloon is highest at:
a) At the lower opening.
b) The upper pole.
c) At the center of the hull.
d) At the equator.
63. With Central European Time (CET) given as UTC+1, what UTC time corresponds to 1700 CET?
a) 1600 UTC.
b) 1800 UTC
c) 1500 UTC.
d) 1700 UTC.
64. Which transponder code has to be set unrequested during an emergency?
a) 7700
b) 7500
c) 7600
d) 7000

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



a) Point B

b) Point D

c) Point C

d) Point A

66. 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

67. Which force causes "wind"?

- a) Thermal force
- b) Pressure gradient force
- c) Coriolis force
- d) Centrifugal force

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

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

69. What is the purpose of the signal square at an aerodrome?

- a) It is a specially marked area to pick up or drop towing objects
- b) It is an illuminated area on which search and rescue and fire fighting vehicles are placed
- c) It contains special symbols to indicate the conditions at the aerodrome visually to over-flying aircraft
- d) Aircraft taxi to this square to get light signals for taxi and take-off clearance

70. What is the call sign of the surface movement control?

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

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

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

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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:		