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STUDENT NAME:	DATE AND TIME:
01. In a METAR, "(moderate) showers of rain'	" are designated by the identifier
a) .+TSRA.	
b) TS.	
c) SHRA.	
d) .+RA.	
02. What are primary criteria for selecting a la surface wind	anding site? 1. Obstacle situation 2. Elevation of the site 3. Strength of
a) 1, 2 and 3	
b) 2 and 3	
c) 1 and 3	
d) 1 and 2	
03. At equilibrium the inner overpressure of a	a free balloon is highest at:
a) At the equator	
b) The upper pole.	
c) At the center of the hull	
d) At the lower opening	
04. Which of the following options states a co	orrect position report?
a) DEABC over "N" in FL 2500 ft	
b) DEABC over "N" at 35	
c) DEABC, "N", 2500 ft	
d) DEABC reaching "N"	
05. Which area could be crossed with certain	restrictions?

a) Restricted areab) No-fly zonec) Prohibited aread) Dangerous area

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#### 06. What is the correct term for a message used for air traffic control?

- a) Flight safety message
- b) Flight regularity message
- c) Message related to direction finding
- d) Meteorological message

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

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

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

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

### 09. What should be considered regarding a scheduled flight over water, when land cannot be reached in case of an emergency landing?

- a) Transponder code 7600 has to be set during the whole flight
- b) Contact to the nearest ATC shall consist during the whole flight
- c) The flight plan has to contain the exact waypoints
- d) For all passengers there must be life jackets or lifeboats present

#### 10. What is the meaning of the abbreviation "VMC"?

- a) Variable meteorological conditions
- b) Visual meteorological conditions
- c) Instrument flight conditions
- d) Visual flight rules

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#### 11. Who provides search and rescue service?

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

### 12. 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.

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

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

#### 14. 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

### 15. 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.

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#### 16. 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

17	. What is the minimu	ım fliaht visihility in	airsnace "C'	' for an aircraft	operating under V	/FR at	FI 1102
	. Wilat is the million	IIII IIIMIIL VISIDIIILV III	all space C	ioi all'all'olait	ODEI ALIIIM UIIMEI V	ııx aı	1 <b>L</b> IIV:

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

18. 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

#### 19. Which distances to clouds have to be maintained during a VFR flight in airpaces C, D and E?

- a) 1000 m horizontally, 300 m vertically
- b) 1000 m horizontally, 1500 ft vertically
- c) 1500 m horizontally, 1000 m vertically
- d) 1500 m horizontally, 1000 ft vertically

#### 20. The term "ceiling" is defined as the ...

- a) Height of the base of the highest layer of clouds covering more than half of the sky below 20000 ft
- b) Height of the base of the lowest layer of clouds covering more than half of the sky below 10000 ft
- c) Altitude of the base of the lowest layer of clouds covering more than half of the sky below 20000 ft.
- d) Height of the base of the lowest layer of clouds covering more than half of the sky below 20000 ft.

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#### 21. The maximum number of passengers can be found ...

- a) In the certicate of registration.
- b) In the operating handbook.
- c) In the Flight Log book
- d) In the airworthiness certificate.

#### 22. The standard state of gases refers to which temperature?

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

### 23. During a flight in an air mass with a temperature equal to ISA and the QNH set correctly, the indicated altitude is...

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

#### 24. 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

### 25. In which situation is it NOT possible to achieve a pressure compensation between the middle ear and the environment?

- a) During a light and slow climb
- b) Breathing takes place using the mouth only
- c) The eustachien tube is blocked
- d) All windows are completely closed

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#### 26. 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.

#### 27. QFE is the ...

- a) Altitude above the reference pressure level 1013.25 hPa.
- b) Magnetic bearing to a station.
- c) Barometric pressure adjusted to sea level, using the international standard atmosphere (ISA).
- d) Barometric pressure at a reference datum, typically the runway threshold of an airfield.

#### 28. What does a readability of 3 indicate?

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

#### 29. What process causes latent heat being released into the upper troposphere?

- a) Descending air across widespread areas
- b) Cloud forming due to condensation
- c) Evaporation over widespread water areas
- d) Stabilisation of inflowing air masses

#### 30. What is the correct way to transmit the call sign OE-JVK?

- a) Omega Echo Juliett Victor Kilogramm
- b) Omega Echo Jankee Victor Kilo
- c) Oscar Echo Juliett Victor Kilo
- d) Oscar Echo Jankee Victor Kilogramm

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#### 31. A true altitude is...

- a) A height above ground level corrected for non-standard pressure
- b) An altitude above mean sea level corrected for non-standard temperature.
- c) A height above ground level corrected for non-standard temperature.
- d) A pressure altitude corrected for non-standard temperature.

#### 32. How does air temperatur change in ISA from MSL to approx. 10.000 m height?

- a) From +30° to -40°C
- b) From -15° to 50°C
- c) From +15° to -50°C
- d) From +20° to -40°C

#### 33. 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.

#### 34. 5500 m equal...

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

#### 35. What pressure pattern can be observed when a cold front is passing?

- a) Continually decreasing pressure
- b) Shortly decreasing, thereafter increasing pressure
- c) Constant pressure pattern
- d) Continually increasing pressure

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#### 36. 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

#### 37. Aerostatic lift, amongst other factors, depends on...

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

### 38. 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.

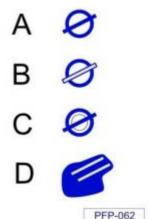
#### 39. What is the distance between the parallels of latitude 48°N and 49°N along a meridian line?

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





40. (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) C
- b) B
- c) D
- d) A

#### 41. 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

42. After take-off with a balloon, obstacles at a distance of 600 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) 1 m/s
- b) 3 m/s
- c) 5 m/s
- d) 10 m/s

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#### 43. 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) Uncolltrollable oscillation of the basket.

#### 44. 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 low. This may lead to much greater heights above the ground than intended
- b) 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
- c) 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
- d) 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

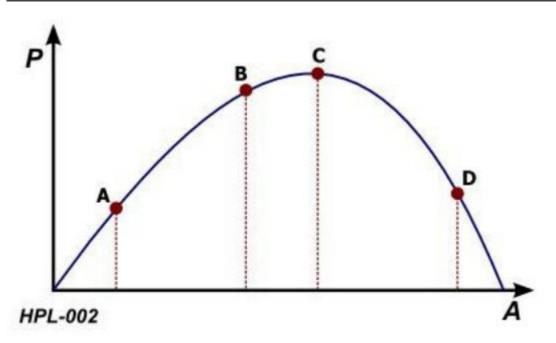
#### 45. Which weather phenomenon is typically associated with wind shear?

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

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46. The ideal level of arousal is at which point in the diagram? See figure (HPL- 002) P = Performance A = Arousal / Stress Siehe Anlage 1



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

#### 47. The ongoing process to monitor the current flight situation is called...

- a) Anticipatory check procedure.
- b) Situational thinking.
- c) Constant flight check.
- d) Situational awareness.

#### 48. The towing rope of a gas balloon can be found on ...

- a) The rip panel side
- b) The sandpourer side
- c) The sliding side
- d) The entry side

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

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

#### 50. 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 poisening the air
- d) The risk of hydrogen self-igniting and burning with invisible flame.

#### 51. What weather conditions can be expected during "Foehn" on the windward side of a mountain range?

- a) Layered clouds, mountains obscured, poor visibility, moderate or heavy rain
- b) Scattered cumulus clouds with showers and thunderstorms
- c) Calm wind and forming of high stratus clouds (high fog)
- d) Dissipating clouds with unusual warming, accompanied by strong, gusty winds

#### 52. The pressure at MSL in ISA conditions is...

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

#### 53. What is the difference in time when the sun moves 10° of longitude?

- a) 0:04 h
- b) 0:40 h
- c) 0:30 h
- d) 1:00 h

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### 54. The standard state of gases refers to which temperature?

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

#### 55. From which altitude on does the body usually react to the decreasing atmospheric pressure?

- a) 7000 feet
- b) 12000 feet
- c) 2000 feet
- d) 10000 feet

### 56. Environmental air temperature and filling gas temperature are the same. Now, the free balloon descents into warmer air. What statement is correct?

- a) Descent force increases.
- b) Descent force decreases.
- c) Weight force increases.
- d) Weight force decreases.

### 57. What is the correct designation of the frequency band from 118.000 to 136.975 MHz used for voice communication?

- a) VHF
- b) MF
- c) MF
- d) HF

### 58. In a given height, a given amount of ballast is uloaded from a gas balloon. How is the increase in height at 5500m different from the increase in height at MSL by unloading the same amount of ballast?

- a) At 5500m the increase in height is twice as high.
- b) At 5500m the increase in height is three times as high.
- c) At both heights the same increase in height is observed.
- d) At 5500m the increase in height is four times as high.

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#### 59. A pilot can contact FIS (flight information service)...

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

#### 60. Visual illusions are mostly caused by...

- a) Misinterpretation of the brain.
- b) Binocular vision.
- c) Rapid eye movements.
- d) Colour blindness.

#### 61. A wind shear is...

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

#### 62. Which characteristic is important when choosing sunglasses used by pilots?

- a) Curved sidepiece
- b) Unbreakable
- c) No UV filter
- d) Non-polarised

#### 63. The measurement of altitude is based on the change of the...

- a) Dynamic pressure.
- b) Static pressure.
- c) Differential pressure.
- d) Total pressure.

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#### 64. How do volume, density and temperature change when a gas is being compressed?

- a) Volume decreases, density increases, temperature increases.
- b) Volume decreases, density increases, temperature increases.
- c) Volume increases, density decreases, temperature decreases
- d) Volume decreases, density decreases, temperature decreases.

### 65. 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.

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

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

#### 67. 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

#### 68. What does a readability of 1 indicate?

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

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69. (For this question, please use annex PFP-061) According ICAO, what symbol indicates a group of unlighted obstacles? Siehe Anlage 5









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

#### 70. 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.

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

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