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STUDENT NAME:	DATE AND TIME:

#### 01. Unless the aircraft is equipped and certified accordingly...

- a) Flight into forecast icing conditions is prohibited. Should the aircraft enter an area of icing conditions inadvertantly, the flight may be continued as long as visual meteorological conditions are maintained.
- b) Flight into known or forecast icing conditions is only allowed as long as it is ensured that the aircraft can still be operated without performance degradation.
- c) Flight into known or forecast icing conditions is prohibited. Should the aircraft enter an area of icing conditions inadvertantly, it should be left without delay.
- d) Flight into areas of precipitation is prohibited.

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

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

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

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

#### 04. Information about maxmimum allowed airspeeds can be found where?

- a) Airspeed indicator, cockpit panel and AIP part ENR
- b) POH, approach chart, vertical speed indicator
- c) POH and posting in briefing room
- d) POH, Cockpit panel, airspeed indicator

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#### 05. What situation is called "over-development" in a weather report?

- a) Change from blue thermals to cloudy thermals during the afternoon
- b) Development of a thermal low to a storm depression
- c) Vertical development of Cumulus clouds to rain showers
- d) Widespreading of Cumulus clouds below an inversion layer

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

- a) Convergence.
- b) Concordence.
- c) Subsidence.
- d) Divergence.

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

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

#### 08. The center of gravity (CG) defines...

- a) The product of mass and balance arm
- b) The point on the longitudinal axis or its extension from which the centers of gravity of all masses are referenced.
- c) The point on the longitudinal axis or its extension from which the centers of gravity of all masses are referenced.
- d) The point through which the force of gravity is said to act on a mass.

#### 09. Which statement regarding a spin is correct?

- a) During recovery the ailerons should be kept neutral
- b) During the spin the speed constantly increases
- c) During recovery the ailerons should be crossed
- d) Only very old aeroplanes have a risk of spinning

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#### 10. Which section of the flight manual describes the basic empty mass of an aircraft?

- a) Limitations
- b) Normal procedures
- c) Weight and balance
- d) Performance

### 11. A boundary between a cold polar air mass and a warm subtropical air mass showing no horizontal displacement is called...

- a) Cold front.
- b) Warm front.
- c) Stationary front.
- d) Occluded front.

#### 12. What process results in the formation of "advection fog"?

- a) Cold, moist air is being moved across warm ground areas
- b) Cold, moist air mixes with warm, moist air
- c) Prolonged radiation during nights clear of clouds
- d) Warm, moist air is moved across cold ground areas

#### 13. Where can the type of restriction for a restricted airspace be found?

- a) AIC
- b) ICAO chart 1:500000
- c) AIP
- d) NOTAM

#### 14. An altitude of 4500 ft is transmitted as...

- a) Four five tousand.
- b) Four five zero zero.
- c) Four tousand five zero zero.
- d) Four tousand five hundred.

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15. An aircraft in the northern hemisphere intends to turn on the shortest way from a heading of 270° to a heading of 360°. At approximately which indication of the magnetic compass should the turn be terminated?
a) 270°
b) 030°
c) 360°
d) 330°
16. Which are the properties of a Mercator chart?
a) The scale is constant, great circles are depicted as curved lines, rhumb lines are depicted as straight lines
b) The scales increases with latitude, great circles are depicted as curved lines, rhumb lines are depicted as straight lines
c) The scales increases with latitude, great circles are depicted as straight lines, rhumb lines are depicted as curved lines
d) The scale is constant, great circles are depicted as straight lines, rhumb lines are depicted as curved lines
17. What cloud sequence can typically be observed during the passage of a warm front?
a) Wind becoming calm, dissipation of clouds and warming during summer; formation of extended high fog layers during winter
b) Squall line with showers of rain and thunderstorms (Cb), gusting wind followed by cumulus clouds with isolated showers of rain
c) Cirrus, thickening altostratus and altocumulus clouds, lowering cloud base with rain, nimbostratus
d) In coastal areas during daytime wind from the coast and forming of cumulus clouds, dissipation of clouds during evening and night
18. Which transponder code indicates a radio failure?
a) 7500
b) 7700
c) 7000
d) 7600

a) The boundary layer starts separating on the upper surface of the profileb) All aerodynamic forces can be considered as attacking at this single point

c) The laminar boundary layer changes into a turbulent boundary layerd) Streamlines are divided into airflow above and below the profile

19. What pattern can be found at the stagnation point?

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

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

#### 21. The rotational axis of the Earth runs through the...

- a) Magnetic 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) Geographic North Pole and on the geographic South Pole.

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

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

#### 23. Which statement about a rhumb line is correct?

- a) A rhumb line is a great circle intersecting the the equator with 45° angle.
- b) The center of a complete cycle of a rhumb line is always the Earth's center.
- c) A rhumb line cuts each meridian at the same angle.
- d) The shortest track between two points along the Earth's surface follows a rhumb line.

#### 24. What is the function of the white blood cells (leucocytes)?

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

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#### 25. Which answer is correct concerning stress?

- a) Everybody reacts to stress in the same manner
- b) Stress and its different symptoms are irrelevant for flight safety
- c) Stress can occur if there seems to be no solution for a given problem
- d) Training and experience have no influence on the occurence of stress

### 26. An aircraft must be loaded and operated in such a way that the center of gravity (CG) stays within the approved limits during all phases of flight. This is done to ensure...

- a) That the aircraft does not exceed the maximum permissible airspeed during a descent
- b) Both stability and controllability of the aircraft.
- c) That the aircraft does not tip over on its tail while it is being loaded.
- d) That the aircraft does not stall.

#### 27. While planning a cross country gliding flight, what ground structure should be avoided enroute?

- a) Stone quarries and large sand areas
- b) Highways, railroad tracks and channels.
- c) Moist ground, water areas, marsh areas
- d) Areas with buildings, concrete and asphalt.

#### 28. The term "center of gravity" is defined as...

- a) Another designation for the neutral point.
- b) The heaviest point on an aeroplane.
- c) Half the distance between the neutral point and the datum line.
- d) Half the distance between the neutral point and the datum line.

#### 29. What change of wind direction can be expected during the passage of a polar front low in Central Europe?

- a) Backing wind during passage of the warm front, veering wind during passage of the cold front
- b) Veering wind during passage of the warm front, veering wind during passage of the cold front
- c) Veering wind during passage of the warm front, backing wind during passage of the cold front
- d) Backing wind during passage of the warm front, backing wind during passage of the cold front

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#### 30. What is the meaning of the phrase "Approved"?

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

#### 31. A wind shear is...

- a) A wind speed change of more than 15 kt.
- b) A meteorological downslope wind phenomenon in the alps.
- 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.

#### 32. After getting around a turning point, what should a glider pilot be prepared for? (2,00 P.)

- a) For weakening thermals due to the progressing time
- b) For a changed horizontal picture due to lower cloud bases
- c) For increased cloud dissipation due to the progressing time
- d) For a changed cloud picture due to the apparently changed position of the sun

### 33. In which way does the position of the center of pressure move at a positively shaped profile with increasing angle of attack?

- a) It moves to the wing tips
- b) It moves forward until reaching the critical angle of attack
- c) It moves forward until reaching the critical angle of attack
- d) It moves forward first, then backward

#### 34. Which phrase is to be repeated three times before transmitting an urgency message?

- a) Mayday
- b) Urgent
- c) Pan Pan
- d) Help

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#### 35. The directional information "12 o'clock" is correctly transmitted as...

- a) One two.
- b) Twelve o'clock.
- c) One two hundred.
- d) One two o'clock

#### 36. What pressure pattern can be observed during the passage of a polar front low?

- a) Rising pressure in front of the warm front, constant pressure within the warm sector, rising pressure behind the cold front
- b) Rising pressure in front of the warm front, rising pressure within the warm sector, falling pressure behind the cold front
- c) Falling pressure in front of the warm front, constant pressure within the warm sector, rising pressure behind the cold front
- d) Falling pressure in front of the warm front, constant pressure within the warm sector, falling pressure behind the cold front

#### 37. Which of the following options is likely to produce large induced drag?

- a) Large aspect ratio
- b) Small aspect ratio
- c) Low lift coefficients
- d) Tapered wings

### 38. Despite several attempts, the landing gear can be extended, but not locked. How should the landing be conducted?

- a) Keep gear unlocked and perform normal landing
- b) Keep a firm grip on gear handle during normal landing
- c) Retract landing gear and perform belly landing with minimum speed
- d) Retract gear and perform belly landing with increased speed

#### 39. Which of the following is NOT a risk factor for hypoxia?

- a) Blood donation
- b) Smoking
- c) Menstruation
- d) Diving

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#### 40. The Pitot / static system is required to...

- a) Prevent potential static buildup on the aircraft.
- b) Measure total and static air pressure.
- c) Prevent icing of the Pitot tube.
- d) Correct the reading of the airspeed indicator to zero when the aircraft is static on the ground.

### 41. The distance between two airports is 220 NM. On an aeronautical navigation chart the pilot measures 40.7 cm for this distance. The chart scale is...

a) 1:500000b) 1:1000000.c) 1:250000.

d) 1 : 2000000.

#### 42. How can a pilot confirm a search and rescue signal on ground in flight?

- a) Push the rudder in both directions multiple times
- b) Fly in a parabolic flight path multiple times
- c) Rock the wings
- d) Deploy and retract the landing flaps multiple times

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

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

### 44. The shown NOTAM is valid until... A1024/13 A) LOWW B) 1305211200 C) 1305211400 E) STOCKERAU VOR STO 113.00 UNSERVICEABLE.

- a) 13/10/2013 00:00 UTC.
- b) 21/05/2014 13:00 UTC.
- c) 21/05/2013 14:00 UTC.
- d) 13/05/2013 12:00 UTC.

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### 45. Which of the following qualities are influenced by stress? 1. Attention 2. Concentration 3. Responsiveness 4. Memory

- a) .1, 2, 3
- b) .2, 4
- c) 1
- d) 1, 2, 3, 4

#### 46. Which effect does a decreasing airspeed have on the induced drag during a horizontal and stable cruise flight?

- a) The induced drag will slightly decrease
- b) The induced drag will collapse
- c) The induced drag will increase
- d) The induced drag will remain constant

#### 47. How can a wind direction indicator be marked for better visibility?

- a) The wind direction indicator may be mounted on top of the control tower.
- b) The wind direction indicator could be made from green materials.
- c) The wind direction indicator could be surrounded by a white circle.
- d) The wind direction indicator could be located on a big black surface.

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#### 48. Up to which altitude is an overflight prohibited according to the NOTAM? See figure (PFP-024) Siehe Anlage 3

A4604/11 NOTAMN

Q)

EDWW/QROLP/IV/NBO/W/000/095/5155N01037E004

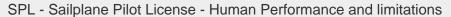
- A) EDWW
- B) 1111180800 C) 1111181200
- E) OVERFLYING PROHIBITED FOR ALL TRAFFIC RADIUS
- 3.35NM CENTERED AROUND 515436N 0103725E DUE
- TO DEMOLITION OF EXPLOSIVES AT ECKERTHAL,
- (25NM S BRAUNSCHWEIG NDB BRU).
- F) GND
- G) 9500 FT AMSL
- a) Altitude 9500 ft MSL
- b) Flight Level 95
- c) Altitude 9500 m MSL
- d) Height 9500 ft

#### 49. What color has the emergency hood release handle?

- a) Green
- b) Red
- c) Yellow
- d) Blue

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

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





### 51. Which are the official basic units for horizontal distances used in aeronautical navigation and their abbreviations?

- a) Nautical miles (NM), kilometers (km)
- b) Land miles (SM), sea miles (NM)
- c) Yards (yd), meters (m)
- d) Feet (ft), inches (in)

#### 52. 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

53. 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 rumb line distance between A and B is always

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

#### 54. What clouds and weather can typically be observed during the passage of a cold front?

- a) Wind becoming calm, dissipation of clouds and warming during summer; formation of extended high fog layers during winter
- b) Cirrus, thickening altostratus and altocumulus clouds, lowering cloud base with rain, nimbostratus
- c) In coastal areas during daytime wind from the coast and forming of cumulus clouds, dissipation of clouds during evening and night
- d) Strongly developed cumulus clouds (Cb) with showers of rain and thunderstorms, gusting wind followed by cumulus clouds with isolated showers of rain

#### 55. The altimeter has to be set to what value in order to show zero on ground?

- a) QTE
- b) QFE
- c) QNE
- d) QNH

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#### 56. How are two parallel runways designated?

- a) The left runway gets the suffix "L", the right runway remains unchanged
- b) The left runway gets the suffix "L", the right runway "R"
- c) The left runway remains unchanged, the right runway designator is increased by 1
- d) The left runway gets the suffix "-1", the right runway "-2"

57. An aircraft is flying with a tr	ue airspeed (TAS) of 180 kt	and a headwind component	of 25 kt for 2 hours and 25
minutes. The distance flown eq	uals	•	

- a) 693 NM.
- b) 202 NM.
- c) 375 NM.
- d) 435 NM.

#### 58. The elevator moves an aeroplane around the...

- a) Vertical axis.
- b) Longitudinal axis.
- c) Elevator axis.
- d) Lateral axis.

### 59. During a high altitude flight (6000 m MSL), the glider pilot realizes that oxygen will be consumed within a few minutes. What actions should be taken by the glider pilot?

- a) After depletion of oxygen, stay at that altitude no longer than 30 min
- b) At first indication of hypoxia, commence descent with maximum allowed speed
- c) Extend spoiler flaps, descent with maximum permissable speed
- d) Reduce oxygen flow by breathing slowly

#### 60. Which of the following options states the working principle of a vertical speed indicator?

- a) Measuring the present static air pressure and comparing it to the static air pressure inside a reservoir
- b) Measuring the vertical acceleration through the displacement of a gimbal-mounted mass
- c) Total air pressure is measured and compared to static pressure
- d) Static air pressure is measured and compared against a vacuum

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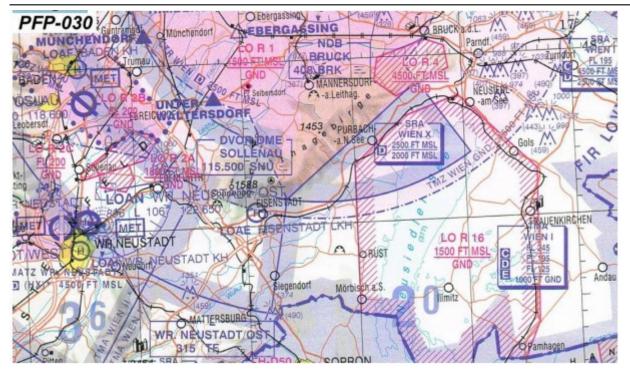
#### 61. The sun moves 10° of longitude. What is the difference in time?

- a) 0.66 h
- b) 0.4 h
- c) 1 h
- d) 0.33 h

#### 62. When landing with tailwind, the pilot has to...

- a) Approach with normal speed and shallow angle.
- b) Compensate tailwind by sideslip.
- c) Increase approach speed.
- d) Land with gear retracted to shorten ground roll distance

#### 63. The upper limit of LO R 4 equals... See annex (PFP-030) Siehe Anlage 2

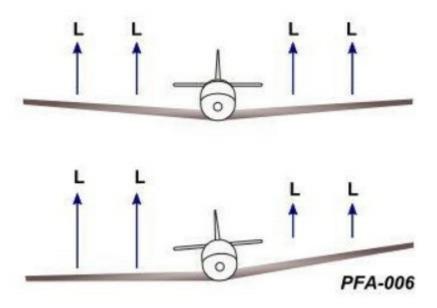


- a) 1.500 ft AGL
- b) 4.500 ft AGL.
- c) 4.500 ft MSL
- d) 1.500 ft MSL.

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#### 64. Which constructive feature is shown in the figure? See figure (PFA-006) L: Lift Siehe Anlage 4



- a) Lateral stability by wing dihedral
- b) Differential aileron deflection
- c) Directional stability by lift generation
- d) Longitudinal stability by wing dihedral

### 65. Two aircraft of the same type, same grossweight and same configuration fly at different airspeeds. Which aircraft will cause more severe wake turbulence?

- a) The aircraft flying at lower altitude.
- b) The aircraft flying at higher speed.
- c) The aircraft flying at higher altitude
- d) The aircraft flying at slower speed

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

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

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### 67. What ist the correct term for an involuntary and stereotypical reaction of an organism to the stimulation of a receptor?

- a) Reduction
- b) Coherence
- c) Virulence
- d) Reflex

#### 68. How does a laminar boundary layer differ from a turbulent boundary layer?

- a) The laminar boundary layer is thinner and provides more skin-friction drag
- b) The turbulent boundary layer can follow the airfoil camber at higher angles of attack
- c) The laminar boundary layer produces lift, the turbulent boundary layer produces drag
- d) The turbulent boundary layer is thicker and provides less skin-friction drag

### 69. What is the correct term for the system which, among others, controls breathing, digestion, and heart frequency?

- a) Critical nervous system
- b) Autonomic nervous system
- c) Automatical nervous system
- d) Compliant nervous system

### 70. 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) 400 NM
- b) 120 NM
- c) 216 NM
- d) 60 NM

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