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STUDENT NAME:	DATE AND TIME:	

01. What danger is most immenent when an aircraft is hit by lightning?

- a) Explosion of electrical equipment in the cockpit
- b) Surface overheat and damage to exposed aircraft parts
- c) Rapid cabin depressurization and smoke in the cabin
- d) Disturbed radio communication, static noise signals

02. Bernoulli's equation for frictionless, incompressible gases states that...

- a) Total pressure = dynamic pressure static pressure.
- b) Total pressure = dynamic pressure + static pressure.
- c) Static pressure = total pressure + dynamic pressure
- d) Dynamic pressure = total pressure + static pressure.

03. During an approach the aeroplane experiences a windshear with a decreasing tailwind. If the pilot does not make any corrections, how do the approach path and the indicated airspeed (IAS) change?

- a) Path is higher, IAS decreases
- b) Path is lower, IAS increases
- c) Path is higher, IAS increases
- d) Path is lower, IAS decreases

04. What is an appropriate reaction when a passenger during cruise flight suddenly feels uncomfortable?

- a) Avoid conversation and choose a higher airspeed
- b) Adjust cabin temperature and prevent excessive bank
- c) Switch on the heater blower and provide thermal blankets
- d) Give additional oxygen and avoid low load factors

05. 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

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

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

07. An aeroplane has a heading of 090°. The distance which has to be flown is 90 NM. After 45 NM the aeroplane is 4.5 NM north of the planned flight path. What is the corrected heading to reach the arrival aerodrome directly?

- a) 18° to the right
- b) 9° to the right
- c) 6° to the right
- d) 12° to the right

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

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

09. Which pressure is sensed by the Pitot tube?

- a) Dynamic air pressure
- b) Cabin air pressure
- c) Total air pressure
- d) Static air pressure

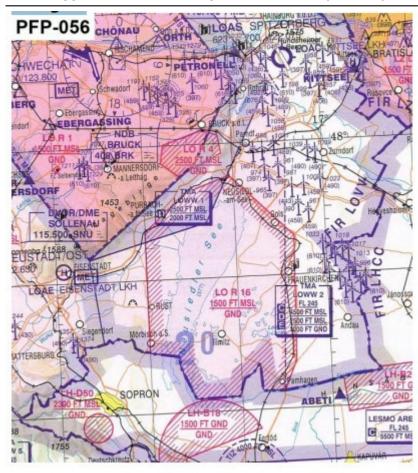
10. QFE is the ...

- 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.

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11. The upper limit of LO R 16 equals... See annex (PFP-056) Siehe Anlage 1



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

12. The compass error caused by the aircraft's magnetic field is called...

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

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13. Baggage and cargo must be properly stowed and fastened, otherwise a shift of the cargo may cause...

- a) Calculable instability if the C.G. is shifting by less than 10 %.
- b) Continuous attitudes which can be corrected by the pilot using the flight controls.
- c) Structural damage, angle of attack stability, velocity stability.
- d) Uncontrollable attitudes, structural damage, risk of injuries.

14. Wake turbulence on or near the runway

- a) Plowed field
- b) Glade with long dry grass
- c) Sports area in a village
- d) Harvested cornfield

15. During flight you have to solve a problem, how to you proceed?

- a) There is no time for solving problems during flight
- b) Solve problem immediately, otherwise refer to the operationg handbook
- c) Contact other pilot via radio for help, keep flying
- d) Primarily fly the airplane and keep it stable, then attend to the problem and keep flying the airplane

16. 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.

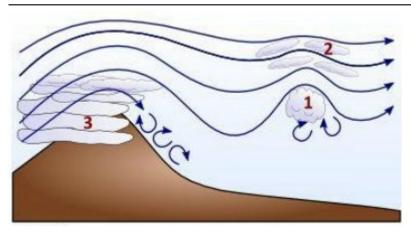
17. The distance between the center of gravity and the datum is called...

- a) Lever.
- b) Torque.
- c) Span width.
- d) Balance arm.

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18. What weather phenomenon designated by "2" has to be expected on the lee side during "Foehn" conditions? See figure (MET-001). Siehe Anlage 1



- a) Cumulonimbus
- b) Cumulonimbus
- c) Altocumulus lenticularis
- d) Altocumulus Castellanus

19. What structural item provides directional stability to an airplane?

- a) Differential aileron deflection
- b) Wing dihedral
- c) Large elevator
- d) Large vertical tail

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

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

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21. (For this question, please use annex PFP-062) According ICAO, what symbol indicates a civil airport (not international airport) with paved runway? (2,00 P.) Siehe Anlage 5









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

22. During a cross-country flight, you approach a downwind turning point. The point should be taken ... (2,00 P.)

- a) As low as possible.
- b) As steep as possible.
- c) As high as possible.
- d) With as less bank as possible

23. The term "flight time" is defined as...

- a) The period from engine start for the purpose of taking off to leaving the aircraft after engine shutdown.
- b) The period from the start of the take-off run to the final touchdown when landing.
- c) The total time from the first aircraft movement until the moment it finally comes to rest at the end of the flight.
- d) The total time from the first take-off until the last landing in conjunction with one or more consecutive flights.

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24. What has to be checked before any change in direction during glide?

- a) Check for turn to be flown coordinated
- b) Check for thermal clouds
- c) Check for loose object secured
- d) Check for free airspace in desired direction

25. Which optical illusion might be caused by a runway with an upslope during the approach?

- a) The pilot has the feeling that the approach is too low and therefore approaches the runway above the regular glide slope
- b) The pilot has the feeling that the approach is too slow and speeds up above the normal approach speed
- c) The pilot has the feeling that the approach is too fast and reduces the speed below the normal approach speed
- d) The pilot has the feeling that the approach is too high and therefore descents below the regular glide slope

26. Which factor shortens landing distance?

- a) Heavy rain
- b) High pressure altitude
- c) High density altitude
- d) Strong head wind

27. Which approximate, geometrical form describes the shape of the Earth best for navigation systems?

- a) Sphere of ecliptical shape
- b) Flat plate
- c) Perfect sphere
- d) Ellipsoid

28. The Caution Area is marked on an airspeed indicator by what color?

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

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29. 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

30. Pressure drag, interference drag and friction drag belong to the group of the...

- a) Parasite drag
- b) Main resistance.
- c) Induced drag.
- d) Total drag.

31. Which conditions are likely for the formation of advection fog?

- a) Warm, humid air cools during a cloudy night
- b) Cold, humid air moves over a warm ocean
- c) Humidity evaporates from warm, humid ground into cold air
- d) Warm, humid air moves over a cold surface

32. 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.

33. What types of boundary layers can be found on an aerofoil?

- a) Laminar boundary layer along the complete upper surface with non-separated airflow
- b) Turbulent layer at the leading wing areas, laminar boundary layer at the trailing areas
- c) Turbulent boundary layer along the complete upper surface with separated airflow
- d) Laminar layer at the leading wing areas, turbulent boundary layer at the trailing areas

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34. How do spread and relative humidity change with increasing temperature?

- a) Spread remains constant, relative humidity increases
- b) Spread remains constant, relative humidity decreases
- c) Spread increases, relative humidity decreases
- d) Spread increases, relative humidity increases

35. How can dangerous situations be prevented when the gliding plane approaches close to a pattern altitude during a cross-country flight?

- a) Try to reach cumuclus clouds visible at the far horizon and use their thermal updrafts
- b) Despite the planned flight, decide for an off-field landing
- c) Maintain radio communication up to full stop after off-field landing
- d) Search for thermal updrafts on the lee side of a selected landing field

36. Which statement about the airflow around an aerofoil is correct if the angle of attack decreases?

- a) The center of pressure moves aft
- b) The center of pressure moves forward
- c) The stagnation point moves down
- d) The stagnation point remains constant

37. Which of the following options does NOT stimulate motion sickness (disorientation)?

- a) Non-accelerated straight and level flight
- b) Head movements during turns
- c) Turbulence in level flight
- d) Flying under the influence of alcohol

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38. 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

39. When air masses meet each other head on, how is this referred to and what air movements will follow?

- a) Convergence resulting in air being lifted
- b) Divergence resulting in air being lifted
- c) Divergence resulting in sinking air
- d) Divergence resulting in sinking air

40. What factors are required for the formation of precipitation in clouds?

- a) The presence of an inversion layer
- b) Moderate to strong updrafts
- c) Calm winds and intensive sunlight insolation
- d) High humidity and high temperatures

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

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

42. What color has the emergency hood release handle?

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

43. 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

44. A flight level is a...

- a) True altitude.
- b) Altitude above ground.
- c) Density altitude.
- d) Pressure altitude.

45. Two engine-driven aircraft are flying on crossing courses at the same altitude. Which one has to divert?

- a) Both have to divert to the left
- b) The lighter one has to climb
- c) The heavier one has to climb
- d) Both have to divert to the right

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46. 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

47. The occurence of a vertigo is most likely when moving the head...

- a) During a turn.
- b) During a straight horizontal flight.
- c) During a climb.
- d) During a descent.

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

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

49. Of what shape is a landing direction indicator?

- a) T
- b) A straight arrow
- c) L
- d) An angled arrow

50. What does the dynamic pressure depend directly on?

- a) Lift- and drag coefficient
- b) Air density and airflow speed squared
- c) Air density and lift coefficient
- d) Air pressure and air temperature

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51. What is the minimum flight visibility in airspace "C" for an aircraft operating under VFR at FL125?

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

52. What is meant by the term "terrestrial navigation"?

- a) Orientation by ground celestial object during visual flight
- b) Orientation by instrument readings during visual flight
- c) Orientation by ground features during visual flight
- d) Orientation by GPS during visual flight

53. What factor may affect the top of cumulus clouds?

- a) The spread
- b) Relative humidity
- c) The absolute humidity
- d) The presence of an inversion layer

54. The term 'True Course' (TC) is defined as...

- a) The direction from an arbitrary point on Earth to the magnetic north pole.
- b) The direction from an arbitrary point on Earth to the geographic North Pole.
- c) Tthe angle between magnetic north and the course line.
- d) The angle between true north and the course line.

55. What chart shows areas of precipitation?

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

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56. 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

57. In case of a stall it is important to ...

- a) Increase the angle of attack and increase the speed.
- b) Decrease the angle of attack and increase the speed.
- c) Increase the angle of attack and reduce the speed.
- d) Increase the bank angle and reduce the speed.

58. A glider pilot has to conduct an off-field landing in a mountainous region. The only available landing site is highly inclined. How should the landing be conducted?

- a) Approach with increased speed, quick flare to follow the inclined ground
- b) Approach down the ridge with increased speed, push according to ground level during landing
- c) According to prevailant wind, approach and land parallel to the ridge with headwind
- d) Approach with minimum speed, careful flare when reaching the landing site

59. What is the correct phrase with respect to wake turbulence to indicate that a light aircraft is following an aircraft of a higher wake turbulence category?

- a) Caution wake turbulence
- b) Be careful wake winds
- c) Danger jet blast
- d) Attention propwash

60. What is the minimum flight visibility in airspace "E" for an aircraft operating under VFR at FL75?

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

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61. How should a glider plane be parked when observing strong winds?

- a) Nose into the wind, keep and weigh tail down
- b) Nose into the wind, extends air brakes, secure rudders
- c) Downwind wing on the ground, weigh wing down, secure rudders
- d) Windward wing on the ground, weigh wing down, secure rudders

62. What structural item provides lateral stability to an airplane?

- a) Wing dihedral
- b) Vertical tail
- c) Differential aileron deflection
- d) Elevator

63. During a flight, a flight plan can be filed at the...

- a) Search and Rescue Service (SAR).
- b) Flight Information Service (FIS).
- c) Next airport operator en-route.
- d) Aeronautical Information Service (AIS)

64. The character of an air mass is given by what properties?

- a) Wind speed and tropopause height
- b) Environmental lapse rate at origin
- c) Region of origin and track during movement
- d) Temperatures at origin and present region

65. During an approach the aeroplane experiences a windshear with a decreasing headwind. If the pilot does not make any corrections, how do the approach path and the indicated airspeed (IAS) change?

- a) Path is higher, IAS increases
- b) Path is lower, IAS decreases
- c) Path is lower, IAS increases
- d) Path is higher, IAS decreases

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66. The mass loaded on the plane is lower than the minimum load required by the load sheet. What action has to be taken?

- a) Trim aircraft to "pitch down"
- b) Change pilot seat position
- c) Change incident angle of elevator
- d) Load ballast weight up to minimum load

67. The term "aerodrome elevation" is defined as...

- a) The highest point of the apron.
- b) The lowest point of the landing area.
- c) The highest point of the landing area.
- d) The average value of the height of the manoeuvring area.

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

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

69. An aircraft is flying at a pressure altitude of 7000 feet with an outside air temperature (OAT) of +11°C. The QNH altitude is 6500 ft. The true altitude equals...

- a) 6500 ft.
- b) 7000 ft
- c) 6250 ft.
- d) 6750 ft.

70. The barometric altimeter with QNH setting indicates...

- a) True altitude above MSL.
- b) Height above MSL
- c) Height above the pressure level at airfield elevation.
- d) Height above standard pressure 1013.25 hPa.

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

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