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STUDENT NAME:	DATE AND TIME:
01. Which of the listed radiotelephony messages has a high	ner priority than a flight safety message?
a) Meteorological message	
b) Communication related to direction finding	
c) Flight regularity message	
d) Aircraft position report message	
02. How does inflowing cold air affect the shape and vertice	al distance between pressure layers?
a) Increase in vertical distance, lowering in height (low pressure	
b) Decreasing vertical distance, raise in height (high pressure)	
c) Decrease in vertical distance, lowering in height (low pressur	re)
d) Increasing vertical distance, raise in height (high pressure)	
03. Air consists of oxygen, nitrogen and other gases. What	is the approximate percentage of other gases?
a) 21 %	
b) 1 %	
c) 0.1 %	
d) 78 %	
04. Which abbreviation is used for the term "obstacle"?	
a) OBTC	
b) OBST	
c) OBS	
d) OST	
05. How can you obtain meteorological information concer	ning airports during a crosscountry flight?
a) VOLMET	
b) METAR	

c) AIRMETd) GAMET

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06. The load factor "n" describes the relationship between...

- a) Drag and lift.
- b) Thrust and drag.
- c) Lift and weight.
- d) Weight and thrust.

07. Why does a flare during an autorotation generate higher rotor RPM?

- a) The pitch angle increases
- b) The vertical airflow through the rotor disc increases
- c) The tangential force tilts backwards
- d) The ground effect leads to better performance

08. Air descending behind a mountain range is defined as...

- a) Anabatic wind.
- b) Divergent wind.
- c) Katabatic wind.
- d) Convergent wind.

09. Wake turbulence is caused by...

- a) Jet blast behind a turbine engine.
- b) Turbulence at the downwind side of a mountain range.
- c) Wind shear at the wingtip of an aerofoil.
- d) Pressure compensation at the wingtip of an aerofoil.

10. The drive system of the autogyro's main rotor is based on...

- a) The speed of the airflow.
- b) A fan in the cabin.
- c) An engine in the cabin.
- d) An engine at the rotor blade tip

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11. What has to be considered when taking off in a ground inversion?

- a) Due to low temperatures close to the ground, icing has to be expected
- b) Climb should be performed with the lowest possible speed and maximum power
- c) During the climb, a sudden increase in speed and climb performance has to be expected
- d) During climb, a sudden decrease in speed and climb performance has to be expected

12. The connection between the main rotor mast and the main rotor head is...

- a) Screwed.
- b) Welded.
- c) Pressed.
- d) Glued.

13. Which of the following options states a correct position report?

- a) DEABC reaching "N"
- b) DEABC, "N", 2500 ft
- c) DEABC over "N" at 35
- d) DEABC over "N" in FL 2500 ft

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

15. A helicopter 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...

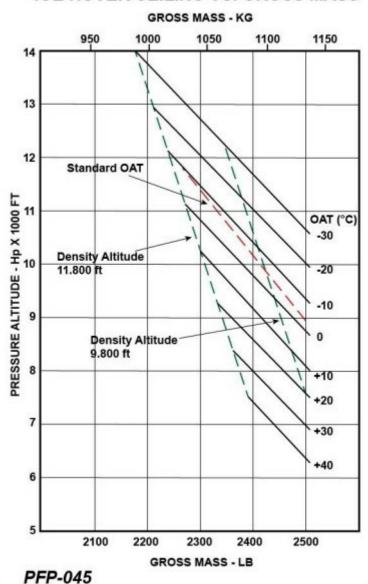
- a) That the helicopter does not stall.
- b) That the helicopter does not exceed the maximum permissible airspeed in a descent.
- c) That the helicopter does not tip over on its tail while it is being loaded.
- d) Both stability and controllability of the helicopter.

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16. What is the maximum pressure altitude to conduct a hover in ground effect if the helicopter mass equals 2400 lbs and the outside air temperature is +20° C? See annex (PFP-045) Siehe Anlage 13

IGE HOVER CEILING VS. GROSS MASS



- a) 9000 ft
- b) 11000 ft
- c) 9500 ft
- d) 8600 ft

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17. What is the meaning of the abbreviation "IFR"?

- a) Instrument Meteorological Conditions
- b) Commercial Flight Rules
- c) Bad Weather Flight Rules
- d) Instrument Flight Rules

18. What impression may be caused when approaching a runway with an upslope?

- a) A landing beside the centerline
- b) An overshoot
- c) An undershoot
- d) A hard landing

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

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

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

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

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

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22. Which statement about the rotor disc loading in a horizontal curve is correct?

- a) It decreases with increasing bank angle
- b) It increases with increasing bank angle
- c) No change in relation to the cruise flight
- d) Effects depend on the type of helicopter

Leaving a control frequency	(except when	reaching the final	parking position)
-----------------------------------------------	--------------	--------------------	-------------------

- a) Must be approved.
- b) Is not mandatory to be reported.
- c) Must be reported
- d) Must be approved twice.

24. Of what shape is a landing direction indicator?

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

25. The rotor RPM is kept constant in the helicopter by the engine RPM. It can be influenced by the...

- a) Cyclic stick.
- b) Throttle and the governor.
- c) Starter and the impulse coupling.
- d) Collective.

26. Which Q-code is used for the true bearing from the station?

- a) QDR
- b) QDM
- c) QTE
- d) QUJ

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27. May an engine, which previously was on fire, be restarted?

- a) Yes, but only if the cause of the fire was a carburettor fire during engine start
- b) Yes, but only on the ground for the purpose of taxiing
- c) No, the risk of a reignition of the fire would be too high
- d) Yes, if the aircraft is flying at a safe altitude

28. Urgency messages are messages...

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

29. What causes the phase lag between the displacement and the flapping of a rotor blade?

- a) Rounding of the rotor blade tips
- b) Inertia, mass, and aerodynamic forces
- c) Friction in the rotor blade spindles
- d) Advance or retreat angle of 90°

30. What is the minimum age to obtain a private pilot license?

- a) 18 years
- b) 17 years
- c) 21 years
- d) 16 years

31. The rotor blade shape takes effect on the...

- a) Lift distribution.
- b) Rotor head used.
- c) Noch sensitivity.
- d) Structural take-off mass.

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

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

33. What is the correct way of acknowledging "You are now entering airspace Delta"?

- a) Wilco
- b) Entering
- c) Roger
- d) Airspace Delta

34. Which is the purpose of the altimeter subscale?

- a) To set the reference level for the altitude decoder of the transponder
- b) To adjust the altimeter reading for non-standard temperature
- c) To correct the altimeter reading for system errors
- d) To reference the altimeter reading to a predetermined level such as mean sea level, aerodrome level or pressure level 1013.25 hPa

35. What weather development will result from convergence at ground level?

- a) Ascending air and cloud dissipation
- b) Descending air and cloud dissipation
- c) Ascending air and cloud formation
- d) Descending air and cloud formation

36. What temperatures are most dangerous with respect to airframe icing?

- a) 0° to -12° C
- b) .+20° to -5° C
- c) .+5° to -10° C
- d) .-20° to -40° C

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37. Quasi-optical waves travel...

- a) Through the air directly from the transmitter to the receiver.
- b) Through the air and are influenced (e.g. reflected) by the ionosphere.
- c) Along the surface of the earth.
- d) Along the surface of the earth, but are absorbed by the sea.

38. The effective angle of attack is the angle between...

- a) Chord line and tip path plane.
- b) Effective airflow and chord line.
- c) Tip path plane and rotor blade.
- d) Effective airflow and tip path plane.

39. The term "tropopause" is defined as...

- a) The boundary area between the mesosphere and the stratosphere.
- b) The boundary area between the troposphere and the stratosphere.
- c) The height above which the temperature starts to decrease.
- d) The layer above the troposphere showing an increasing temperature.

40. Given: QDR: 152° VAR: 5° W DEV: 5° E The QUJ equals...

- a) 317°
- b) 327°.
- c) 147°.
- d) 332°.

41. With respect to aircraft accident and incident investigation, what are the three categories regarding aircraft occurrences?

- a) Incident Serious incident Accident
- b) Event Serious event Accident
- c) Happening Event Serious event
- d) Event Crash Disaster

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42. What is the approximate speed of electromagnetic wave propagation?

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

43. At higher altitudes, true airspeed (TAS) tends to be higher than calibrated airspeed (CAS). A rough estimate of the TAS can be obtained by...

- a) Subtracting 2 % of the CAS for every 1000 ft altitude.
- b) Adding 2 % of the CAS for every 1000 ft altitude.
- c) Subtracting 10 % of the CAS for every 1000 m altitude.
- d) Adding 10 % of the CAS for every 1000 ft altitude.

44. In case of an emergency ditching, the life vests have to be inflated...

- a) Before disembarking the aircraft.
- b) After disembarking the aircraft at a safe distance of about 10 m.
- c) During disembarking the aircraft.
- d) After disembarking the aircraft.

45. An aerodrome beacon (ABN) is a...

- a) Rotating beacon installed at an airport or aerodrome to indicate its location to aircraft pilots from the air.
- b) Rotating beacon installed at an airport or aerodrome to indicate its location to aircraft pilots from the ground.
- c) Rotating beacon installed at the beginning of the final approach to indicate its location to aircraft pilots from the air
- d) Fixed beacon installed at an airport or aerodrome to indicate its location to aircraft pilots from the air.

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

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

PPL(H) - Private Pilot License - Navigation



47. A deceleration during a straight horizontal flight can lead to the illusion of...

- a) An inverted flight.
- b) A descent.
- c) A climb.
- d) A bank.

48. Which instantaneous information can be obtained from ground radar equipment?

- a) Airspeed (TAS) and heading
- b) Direction and airspeed (TAS)
- c) Distance and direction
- d) Airspeed (TAS) and distance

49. What does a readability of 1 indicate?

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

50. Given: True course: 270°. TAS: 100 kt. Wind: 090°/25 kt. Distance: 100 NM. The ground speed (GS) equals...

- a) 120 kt.
- b) 117 kt.
- c) 131 kt.
- d) 125 kt.

51. Piston engines of helicopters have...

- a) One magneto ignition system.
- b) Two independent ignition systems.
- c) Two coupled ignition systems.
- d) One electrical ignition system.

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52. During an autorotation the airspeed is limited by...

- a) The displacement of the stall regions in the inner area of the rotor blade.
- b) The interference drag during low rates of descent.
- c) The landing gear during the touchdown.
- d) The drift of the driving forces on the returning blade.

53. The term "static pressure" is defined as pressure...

- a) Sensed by the pitot tube.
- b) Resulting from orderly flow of air particles.
- c) Of undisturbed airflow.
- d) Inside the airplane cabin.

54. What is the meaning of the 1:60 rule?

- a) 60 NM lateral offset at 1° drift after 1 NM
- b) 10 NM lateral offset at 1° drift after 60 NM
- c) 6 NM lateral offset at 1° drift after 10 NM
- d) 1 NM lateral offset at 1° drift after 60 NM

55. The term ,magnetic course' (MC) is defined as...

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

56. What is the risk arising in a vertical autorotation with a subsequent increase in airspeed prior to the landing?

- a) High rotor RPM
- b) Vortex ring state
- c) Loss of the tail rotor efficiency
- d) Misjudgement when increasing the airspeed

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

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

58. The saturated adiabatic lapse rate is...

- a) Proportional to the dry adiabatic lapse rate.
- b) Higher than the dry adiabatic lapse rate.
- c) Lower than the dry adiabatic lapse rate.
- d) Equal to the dry adiabatic lapse rate.

59. The maximum range in an autorotation will be achieved by...

- a) A relatively low effective angle of attack.
- b) A neutral effective angle of attack.
- c) A relatively high effective angle of attack.
- d) A negative effective angle of attack.

60. Which movement is caused by the Coriolis effect on the advancing rotor blade?

- a) Mass movement outwards
- b) Drag movement forwards
- c) Tilt movement backwards
- d) Flapping downwards

61. Winds blowing downhill are defined as...

- a) Subsident winds.
- b) Anabatic winds.
- c) Convergent winds.
- d) Katabatic winds.

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62. An inversion layer close to the ground can be caused by...

- a) Ground cooling during the night.
- b) Thickening of clouds in medium layers.
- c) Intensifying and gusting winds.
- d) Large-scale lifting of air.

63. Given: WCA: -012°; TH: 125°; MC: 139°; DEV: 002°E What are: TC, MH und CH? (2,00 P.)

a) TC: 137°. MH: 139°. CH: 125°.

b) TC: 137°. MH: 127°. CH: 125°.

c) TC: 113°. MH: 139°. CH: 129°.

d) TC: 113°. MH: 127°. CH: 129°.

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

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

65. What does the abbreviaton "FIR" stand for?

- a) Flight integrity receiver
- b) Flight information region
- c) Flow information radar
- d) Flow integrity required

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

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

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67. Up to which altitude is an overflight prohibited according to the NOTAM? See figure (PFP-024) Siehe Anlage 10

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) Height 9500 ft
- b) Flight Level 95
- c) Altitude 9500 ft MSL
- d) Altitude 9500 m MSL

68. The average decrease of blood alcohol level for an adult in one hour is approximately...

- a) 0.3 percent.
- b) 0.01 percent
- c) 0.1 percent.
- d) 0.03 percent.

69. A Grey-out is the result of...

- a) Tiredness.
- b) Hypoxia
- c) Hyperventilation.
- d) Positive g-forces.

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70. 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 slower speed.
- c) The aircraft flying at higher altitude.
- d) The aircraft flying at higher speed.

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

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