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STUDENT NAME:	DATE AND TIME:
04. What pands to be absented if the configuration hast is applied in a	a havvav2

#### 01. What needs to be observed if the carburettor heat is applied in a hover?

- a) Gain of power
- b) Loss of power
- c) Reduction of pre-ignition
- d) Increase of rotor rpm

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

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

#### 03. The term "maximum elevation figure" (MEF) is defined as...

- a) The highest elevation within an area covering 30 minutes of latitude and 30 minutes of longitude.
- b) The highest elevation within an area covering 30 minutes of latitude and 30 minutes of longitude plus a safety margin, rounded to the next higher 100 ft.
- c) The highest elevation within an area covering 30 minutes of latitude and 30 minutes of longitude plus a safety margin of 1000 ft (305 m), rounded to the next higher 100 ft.
- d) The highest elevation within an area covering 1 degree of latitude and 1 degree of longitude plus a safety margin, rounded to the next lower 100 ft.

#### 04. Winds blowing downhill are defined as...

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

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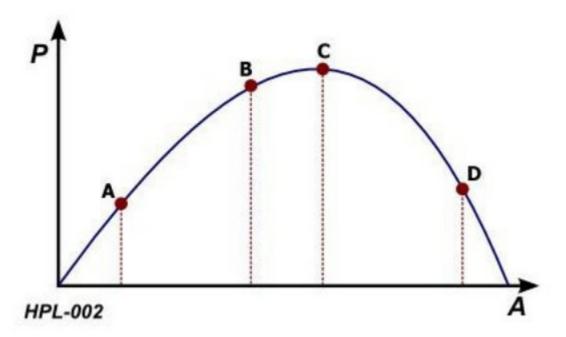
05. An aircraft is following a true course (TC) of 040° at a constant true airspeed (TAS) of 180 kt. The wind vector is 350°/30 kt. The groundspeed (GS) equals...

- a) 172 kt.
- b) 155 kt.
- c) 168 kt.
- d) 159 kt

06. 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

07. 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 A
- b) Point B
- c) Point D
- d) Point C

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#### 08. Wake turbulence is particularly strong...

- a) When flying at low speeds.
- b) When flying at high altitudes.
- c) When flying at low altitudes.
- d) When flying at high speeds.

#### 09. Which factor can lead to human error?

- a) Double check of relevant actions
- b) Proper use of checklists
- c) The bias to see what we expect to see
- d) To be doubtful if something looks unclear or ambiguous

#### 10. What is the reason for static dischargers on aircraft?

- a) To improve the quality of radio transmission in high altitudes
- b) To discharge static charging during flight
- c) To ensure grounding during refueling
- d) To eliminate electrical interferences during intensive radio traffic

#### 11. The trim is used to...

- a) Adapt the control force.
- b) Lock control elements.
- c) Move the centre of gravity.
- d) Increase adverse yaw.

#### 12. Which items should a passenger briefing in case of an imminent emergency landing include?

- a) Blood type of the other aircraft occupants, location of the first-aid kit
- b) Nature of the emergency, intentions, safety position, evacuation routes, actions after landing
- c) How to work the aircraft radio, emergency transponder squawk, telephone number of the competent search and rescue (SAR) center
- d) How to read an emergency checklist, how to cut the engine, telephone number of the home airport

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

#### 14. 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.

#### 15. Which section of the flight manual describes the centre of gravity limitations of a helicopter?

- a) Limitations
- b) Normal procedures
- c) Performance
- d) Supplements

### 16. An aircraft is following a true course (TC) of 040° at a constant true airspeed (TAS) of 180 kt. The wind vector is 350°/30 kt. The wind correction angle (WCA) equals...

- a) 7° right.
- b) 3° left
- c) 3° right.
- d) 7° left.

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

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

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#### 18. 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.

#### 19. The term "datum" with regard to a mass and balance calculation defines...

- a) The distance from the reference plane to the center of gravity of an aircraft.
- b) The point on the longitudinal axis of an aeroplane or its extension from which the centers of gravity of all masses are referenced.
- c) The point on the vertical axis of an aeroplane or its extension from which the centers of gravity of all masses are referenced.
- d) The point on the lateral axis of an aeroplane or its extension from which the centers of gravity of all masses are referenced.

#### 20. The altimeter can be checked on the ground by setting...

- a) QNE and checking that the indication shows zero on the ground.
- b) QFF and comparing the indication with the airfield elevation.
- c) QNH and comparing the indication with the airfield elevation.
- d) QFE and comparing the indication with the airfield elevation.

### 21. What is the message of the NOTAM shown below? B7938/11 NOTAMN Q) LECB/QMRLC/IV/NBO/A /000/999/3933N00244E005 A) LEPA B) 1111212200 C) 1111220500 E) RWY 24L/06R CLOSED

- a) Runway 24L/06R at Palma de Mallorca (LEPA) airport will be closed from November 21st 2011 2200 local time until November 22nd 2011 0500 local time
- b) Runway 24L/06R at Palma de Mallorca (LEPA) airport will be closed from November 21st 2011 2200 UTC until November 22nd 2011 0500 UTC
- c) Runway 24L/06R at Palma de Mallorca (LEPA) airport will be closed from present time (000) indefinitely (999)
- d) Runway 24L/06R at Cataluña/Barcelona (LECB) airport will be closed from November 21st 2011 2200 UTC until November 22nd 2011 0500 UTC

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#### 22. What does "WATER PATCHES" mean regarding the reported runway condition?

- a) The runway is clear of water, ice, and snow
- b) Patches of standing water are visible
- c) A large part of the surface is flooded
- d) Wet surface, but no significant patches are visible

#### 23. What weather phenomena have to be expected around an upper-level trough?

- a) Calm wind, forming of shallow cumulus clouds
- b) Development of showers and thunderstorms (Cb)
- c) Formation of high stratus clouds, ground-covering cloud bases
- d) Calm weather, formation of lifted fog layers

#### 24. The control mixing assembly...

- a) Releases the sprag freewheel and prevents rotor blockage by the engine.
- b) Overlays periodic and collective control inputs for main rotor pitch angle change.
- c) Ensures a constant pressure distribution in a hydraulic control system of a helicopter.
- d) Opens the throttle and increases engine performance if the collective is reduced.

#### 25. What is the meaning of "risky shift"?

- a) Seat adjustment in flight
- b) The tendency to accept higher risks in groups
- c) Crossing of rudder and ailerons on short final
- d) Spontaneous change of landing direction when the runway has an upslope

#### 26. The hydraulic pump of the control system is driven by the...

- a) Main rotor gearbox.
- b) Additional aggregate.
- c) Engine.
- d) Alternator.

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#### 27. What document contains information about the fuel consumption?

- a) Mass and balance report
- b) Log book
- c) Flight manual (POH)
- d) Airworthiness certificate

#### 28. Given: True course: 120°. TAS: 120 kt. Wind: 150°/12 kt. The WCA equals...

- a) 6° to the left.
- b) 3° to the right
- c) 6° to the right.
- d) 3° to the left.

#### 29. 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.

#### 30. 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.

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31. (For this question, please use annex PFP-063) According ICAO, what symbol indicates a general spot elevation? (2,00 P.) Siehe Anlage 18

- A 300
- B (300)
- C · 1737
- D · 1737

PFP-063

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

#### 32. What does a readability of 3 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

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

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

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#### 34. A VOR radial corresponds to the...

a١	ODR
a)	QUN.

- b) QDM.
- c) QUJ.
- d) QTE.

#### 35. 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.

#### 36. How can you obtain meteorological information concerning airports during a crosscountry flight?

- a) VOLMET
- b) METAR
- c) AIRMET
- d) GAMET

#### 37. What action has no effect on the rotor RPM in an autorotation?

- a) Utilisation of friction brake.
- b) Centre of gravity displacement.
- c) Pitch angle change.
- d) Transition into a turning flight.

#### 38. The airframe of an accelerating helicopter continues to bend until the...

- a) Horizontal thrust component equals the drag.
- b) Thrust passes in front of the centre of gravity.
- c) Vertical thrust component equals the drag.
- d) Thrust passes behind the centre of gravity.

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#### 39. Radio waves within the LF and MF range (e.g. NDB) travel as...

- a) Space wave (quasi-optical)
- b) Sky wave and as ground / surface wave.
- c) Sky wave.
- d) Ground / surface wave.

#### 40. What is the minimum flight visibility in airspace "C" at and above FL 100 for an aircraft operating under VFR?

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

#### 41. What is shown on the printed sign? See figure (ALW-020) Siehe Anlage 2



- a) From this intersection the available runway length is 2500 m in the stated direction
- b) 2500 m in the stated direction till reaching the departure point of the runway
- c) 2500 m in the stated direction till reaching the parking area
- d) The complete length of the runway in the stated direction is 2500 m

#### 42. 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

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#### 43. The airspeed indicator is unservicable. The airplane may only be operated...

- a) If no maintenance organisation is around.
- b) When the airspeed indicator is fully functional again.
- c) When a GPS with speed indication is used during flight.
- d) If only airfield patterns are flown.

44.	The	altimeter	has to	be set to	what	value in	order t	to show	zero on	ground?
-----	-----	-----------	--------	-----------	------	----------	---------	---------	---------	---------

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

#### 45. A flight level is a...

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

#### 46. The rotor brake should be engaged (provided that no other procedure is described in the flight manual)...

- a) During all prescribed pre-flight checks on the ground.
- b) For inside parking.
- c) For outside parking.
- d) During start-up until reaching the prescribed rotor rpm.

#### 47. What is the advantage of a hingeless rotor?

- a) Good autorotation characteristics
- b) Few components are necessary
- c) Excellent blade tracking
- d) Better lift distribution

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#### 48. An autorotation in a mountainous area is performed:

- a) Downwind under obstacles observance.
- b) Upslope without any yawing.
- c) Downslope with inclined rotor.
- d) Upwind and across the slope.

#### 49. What can be expected during a hover flight in ground effect within a forest glade?

- a) Useful ground effect caused by a smaller induced airflow
- b) No air turbulence through the slipstream and stable attitude
- c) Aspiration of the tail rotor in the direction of the forest and a performance gain
- d) Recirculation of air masses and an impairment of the ground effect

#### 50. The indication of a magnetic compass deviates from magnetic north direction due to what errors?

- a) Gravity and magnetism
- b) Deviation, turning and acceleration errors
- c) Inclination and declination of the earth's magnetic field
- d) Variation, turning and acceleration errors

#### 51. Which of the following is NOT a symptom of hyperventilaton?

- a) Tingling
- b) Spasm
- c) Disturbance of consciousness
- d) Cyanose

#### 52. Which of the following messages has the highest priority?

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

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#### 53. The validity of a medical examination certificate class 2 for a 62 years old pilot is...

a) 12 Months.
b) 48 Months.
c) 24 Months.
d) 60 Months.
54. Given: Calibrated airspeed (CAS): 155 kt. Flight level (FL) 80. Outside air temperature (OAT): +15° C. The true airspeed (TAS) equals
a) 180 kts.
b) 170 kts.
c) 155 kts.
d) 134 kts.
55. Under which circumstances is it more likely to accept higher risks?
a) Due to group-dynamic effects
b) During check flights due to a high level of nervousness
c) During flight planning when excellent weather is forecast
d) If there is not enough information available
56. The on-board equipment of the secondary surveillance radar (SSR) is called
a) Transponder
b) Interrogator.
c) Decoder.
d) Course indicator.
57. A risk factor for decompression sickness is

### a) 100 % oxygen after decompression.

- b) Sports.
- c) Smoking.
- d) Scuba diving prior to flight.

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### 58. During a flight with a flight plan submitted, landing is conducted at an airfield other than the destination stated in the filed flight plan. Who has to be contacted by the pilot immediately?

- a) The police department
- b) Aeronatical Information Service (AIS).
- c) The flight manager on duty.
- d) Local office for aereal supervision.

#### 59. Smoke enters the cockpit during an engine fire. Which actions have to be taken immediately?

- a) Switching off the pitot and front window heating
- b) Switching off the master switch and the ignition
- c) Switching off the heating and the ventilating system
- d) Switching off the avionics and the cabin lighting

#### 60. Which altitude is displayed on the altimeter when set to a specific QFE?

- a) Altitude in relation to the highest elevation within 10 km
- b) Altitude in relation to the air pressure at the reference airfield
- c) Altitude in relation to the 1013.25 hPa datum
- d) Altitude in relation to mean sea level

#### 61. Heavy downdrafts and strong wind shear close to the ground can be expected...

- a) During approach to an airfield at the coast with a strong sea breeze.
- b) During warm summer days with high, flatted Cu clouds.
- c) Near the rainfall areas of heavy showers or thunderstorms
- d) During cold, clear nights with the formation of radiation fog.

#### 62. What might be the reason for scratches on the tail stringer?

- a) Old colour
- b) Intense erosion
- c) Rotor blade contact
- d) Contact with ground

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#### 63. In airspace "D" a Boeing 737 and a Cessna 152 are flying on crossing courses. Which aeroplane has to divert?

- a) The aeroplane flying from right to left has priority, the other one has to divert
- b) The Boeing 737, because an airliner has greater power reserves
- c) The air traffic control (ATC) has to decide which one has to divert
- d) The Cessna 152, because IFR and commercial flights have priority

- a) 165°.
- b) 126°.
- c) 152°.
- d) 158°.

#### 65. 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

#### 66. Cold air inflow in high tropospheric layers may result in...

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

#### 67. What information is provided in the general part (GEN) of the AIP?

- a) Map icons, list of radio nav aids, time for sunrise and sunset, airport fees, air traffic control fees
- b) Table of content, classification of airfields with corresponding maps, approach charts, taxi charts, restricted and dangerous airspaces
- c) Access restrictions for airfields, passenger controls, requirements for pilots, license samples and validity periods
- d) Warnings for aviation, ATS airspaces and routes, restricted and dangerous airspaces

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#### 68. What needs to be observed in conjunction with flying above mountainous terrain?

- a) Unexpected changes in weather and turbulence.
- b) Unexpected overspeed faults and vibrations
- c) Carburettor icing in piston engines
- d) Icing conditions over the predicted freezing level

#### 69. What kind of information should be included in an urgency message?

- a) Intended routing, important information for support, intentions of the pilot, departure aerodrome, destination aerodrome, heading and altitude
- b) Nature of problem or observation, important information for support, intentions of the pilot, information about position, heading and altitude
- c) Nature of problem or observation, important information for support, departure aerodrome, information about position, heading and altitude
- d) Intended routing, important information for support, intentions of the pilot, information about position, departure aerodrome, heading and altitude

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

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

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

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