

Exam simulation

PPL(H) - Private Pilot License - Meteorology



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STUDENT NAME:

DATE AND TIME:

01. What document contains information about the fuel consumption?

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

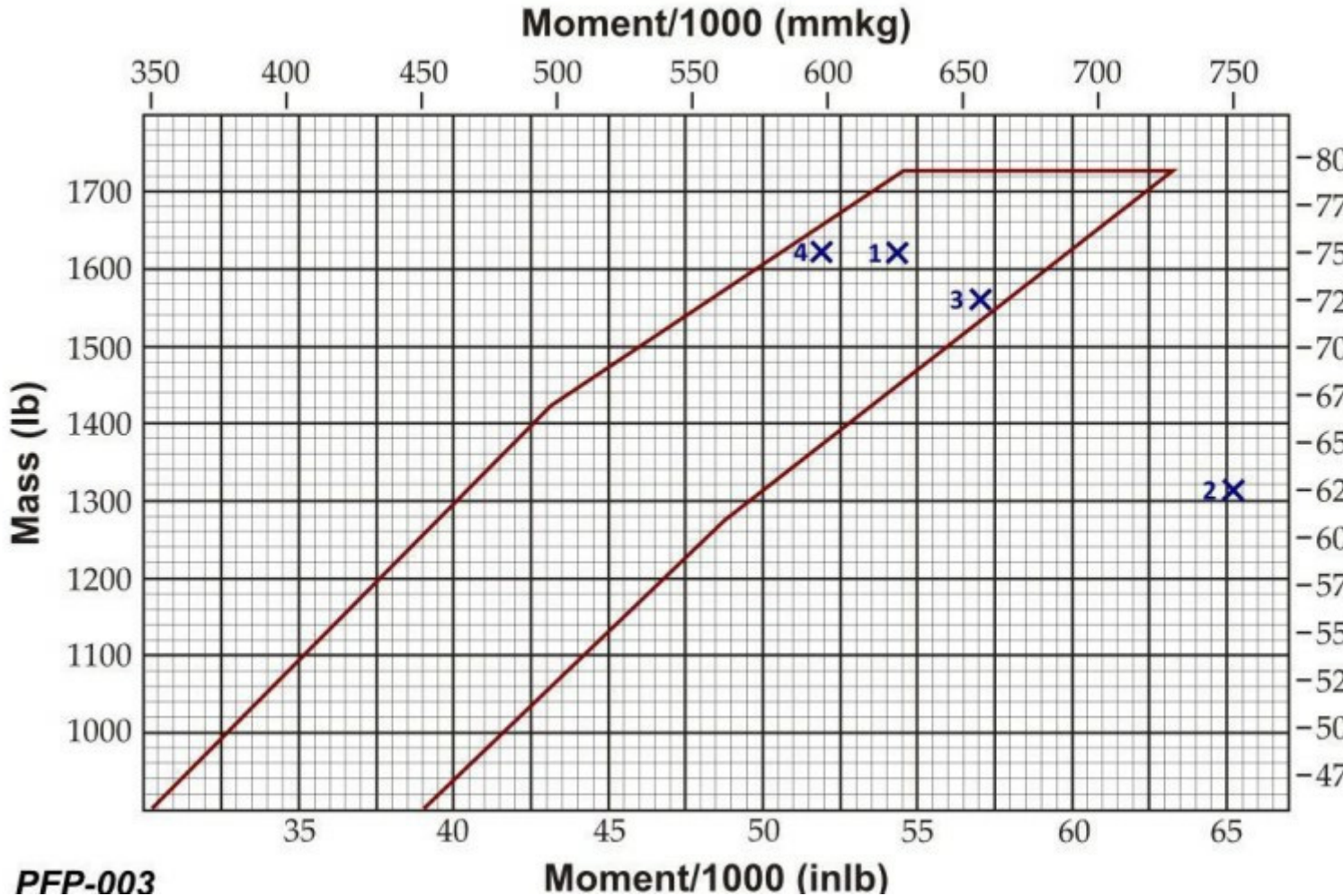
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02. For the purpose of a flight preparation, the pilot calculates a total take-off mass of 750 kg and a total moment of 625 mmkg. Which cross marks the center of gravity (CG)? See annex (PFP-003)



PFP-003

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

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

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

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04. Which answer states a risk factor for diabetes?

- a) Alcohol consumption
- b) Sleep deficiency
- c) Smoking
- d) Overweight

05. What phenomenon is caused by cold air downdrafts with precipitation from a fully developed thunderstorm cloud?

- a) Anvil-head top of Cb cloud
- b) Freezing Rain
- c) Electrical discharge
- d) Gust front

06. What has to be considered during refueling?

- a) Apply ground wires, turn on the main switch and magneto ignition
- b) No open fires, obey smoking ban and apply ground cables
- c) Check the fuel content of the tank with a torch and remove fire protection
- d) Refuel through a soaked rag and keep a fire extinguisher available

07. 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

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.

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09. Which ratio corresponds to the rotor disc loading?

- a) Rotor disc / helicopter mass
- b) Rotor thrust / rotor disc
- c) Rotor disc / rotor thrust
- d) Helicopter mass / rotor disc

10. After take-off an aeroplane gets into a wind shear with decreasing headwind. As a result...

- a) The aeroplane flies below the estimated climb path.
- b) The aeroplane flies above the estimated climb path.
- c) The ground speed (GS) will decrease.
- d) The true airspeed (TAS) will increase.

11. Which landing site (no wind) prevents the impairment of the ground effect?

- a) Plain terrain
- b) Narrow forest glade
- c) Elevated helipad
- d) Sloping ground

12. The position of the center of gravity (including fuel) equals... See figure(PFP-053e)

ITEM	MASS	ARM
Basic Empty Mass	560 kg	0,35 m
Pilot and Passenger	150 kg	0,4 m
Baggage	15 kg	0,65 m
Fuel	60 l	0,45 m

- a) 0.403 m.
- b) 37.3 cm.
- c) 37.1 cm.
- d) 0.401 m.



13. Which type of cloud is associated with prolonged rain?

- a) Cumulonimbus
- b) Nimbostratus
- c) Cirrostratus
- d) Altocumulus

14. Why is it dangerous to pump the throttle for engine start in cold weather?

- a) It may cause a carburettor fire
- b) Carburettor icing can occur
- c) The oil will become diluted
- d) The engine might start with not enough power

15. What happens to thrust and tangential force if the rotor RPM decreases by about 10 % in cruise flight?

- a) The thrust and the tangential force decrease
- b) The thrust and the tangential force increase
- c) The thrust decreases and the tangential force remains constant
- d) The thrust remains constant and the tangential force increases

16. Which energies serve to maintain the rotor rpm in an autorotation?

- a) Potential or kinetic energy
- b) Mechanical or chemical energy
- c) Rotational and linear energy
- d) Frictional and flow energy

17. How often shall a blind transmission be made?

- a) One time
- b) Three times
- c) Two times
- d) Four times

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18. 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

19. What is the correct way to counteract the vortex ring state?

- a) Raise collective and decrease rotor RPM
- b) Raise collective and pull back the stick
- c) Try to gain airspeed and enter autorotation
- d) Open throttle and pull back the stick

20. The approximate propagation speed of electromagnetic waves is...

- a) 300000 km/s.
- b) 300000 m/s.
- c) 300000 NM/s
- d) 300000 ft/s.

21. What behaviour is shown by a rotating gyro in space?

- a) It moves in accordance with the body surrounding it
- b) It swings from east to west like a pendulum
- c) It moves in circles with a steadily decreasing radius
- d) It tends to maintain its position in space

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22. Which answer completes the flight plan (marked cells)? See annex (NAV-014)

P6		P7		P8	P9	P9	P10	
NAV-014		Wind W/V		rwk	L	rwSK	MW	mwSK
VE	Wind W/WS							
TAS	Richtung	Geschw.	TC	WCA	TH	VAR	MH	
75	320	15	247	+11	258	1	257	
95	320	15	152	+2	154	1	153	
95	320	15	139	0	139	1	138	
95	320	15	161	+3	164	1	163	
95	320	15	179	+6		1		

- a) TH: 173°. MH: 184°. MC: 178°
- b) TH: 185°. MH: 185°. MC: 180°
- c) TH: 173°. MH: 174°. MC: 178°
- d) TH: 185°. MH: 184°. MC: 178°

23. 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

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24. The "spread" is defined as...

- a) Relation of actual to maximum possible humidity of air
- b) Difference between dew point and condensation point
- c) Maximum amount of water vapour that can be contained in air
- d) Difference between actual temperature and dew point

25. What does the abbreviation "HX" stand for?

- a) 24 h service
- b) Sunrise to sunset
- c) No specific opening hours
- d) Sunset to sunrise

26. What are the variable physical properties of the atmosphere that affect the helicopter performance?

- a) Temperature, pressure, and carbon content
- b) Temperature, pressure, and humidity
- c) Pressure, humidity, and specific gravity
- d) Pressure, humidity, and nitrogen content

27. What is the correct way of establishing radio communication between D-EAZF and Dusseldorf Tower?

- a) DEAZF is calling Dusseldorf Tower
- b) Dusseldorf Tower over
- c) Dusseldorf Tower D-EAZF
- d) Tower from D-EAZF

28. 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

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29. What factor is affected by headwind during a departure?

- a) Rate of climb
- b) Climb path angle
- c) V_x
- d) V_y

30. 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

31. Given: TC: 183°; WCA: +011°; MH: 198°; CH: 200° What are the TH and the DEV?

- a) TH: 194°. DEV: -002°.
- b) TH: 172°. DEV: +002°.
- c) TH: 194°. DEV: +002°
- d) TH: 172°. DEV: -002°.

32. What is necessary in terms of PART-FCL after differences training for helicopters?

- a) An application for renewal must be filed for the competent authority in a prescribed form and manner
- b) The logbook of the pilot or an equivalent document must be signed by the flight instructor
- c) A flight order for solo flights must be submitted to the competent authority by the instructor
- d) The pilot must pass a written line check exam in an aviation school

33. What is an indication for a macho attitude?

- a) Risky flight maneuvers to impress spectators on ground
- b) Comprehensive risk assessment when faced with unfamiliar situations
- c) Quick resignation in complex and critical situations
- d) Careful workaround procedure

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34. An aircraft is flying with a true airspeed (TAS) of 180 kt and a headwind component of 25 kt for 2 hours and 25 minutes. The distance flown equals...

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

35. The altimeter's reference scale is set to airfield pressure (QFE). What indication is shown during the flight?

- a) Altitude above MSL
- b) Airfield elevation
- c) Pressure altitude
- d) Height above airfield

36. 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

37. Anemic hypoxia can be caused by...

- a) High altitudes
- b) Low pressure
- c) Carbon monoxide poisoning
- d) Alcohol

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38. Where is the aircraft located in relation to the VOR? See annex (NAV-022)



NAV-022

- a) Northwest
- b) Southeast
- c) Northeast
- d) Southwest

39. Which of the following options has an effect on the autorotation characteristics?

- a) Smoothly working tail rotor control and low RPM warning systems
- b) Air temperature and wind speed
- c) Pressure altitude and wind speed
- d) Helicopter mass and density altitude

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40. In what case is visibility transmitted in meters?

- a) Up to 5 km
- b) Greater than 5 km
- c) Up to 10 km
- d) Greater than 10 km

41. What is the meaning of the phrase "Approved"?

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

42. Which type of ice forms by very small water droplets and ice crystals hitting the front surfaces of an aircraft?

- a) Clear ice
- b) Mixed ice
- c) Rime ice
- d) Hoar frost

43. What has to be done before entering a TMZ?

- a) Switch on the transponder, activate mode A, and squawk "IDENT"
- b) Switch on the transponder and activate mode A and C or mode S
- c) File a flight plan before the flight
- d) Request a clearance before entering

44. The height of the tropopause of the International Standard Atmosphere (ISA) is at...

- a) 48000 ft.
- b) 5500 ft.
- c) 36000 ft.
- d) 11000 ft.

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45. The range of NDBs transmitting in the medium frequency range is greatest...

- a) On midday.
- b) Before midday.
- c) In the daytime.
- d) At night.

46. Which of the following frequencies is designated for VHF voice communication?

- a) 118.75 MHz
- b) 327.25 MHz
- c) 327.25 kHz
- d) 118.75 kHz

47. What is the mean height of the tropopause according to ISA (ICAO Standard Atmosphere)?

- a) 11000 ft
- b) 36000 m
- c) 18000 ft
- d) 11000 m

48. Which process may result in an inversion layer at about 5000 ft (1500 m) height?

- a) Widespread descending air within a high pressure area
- b) Intensive sunlight insolation during a warm summer day
- c) Ground cooling by radiation during the night
- d) Advection of cool air in the upper troposphere

49. 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

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50. 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

51. What does a cloud coverage of "SCT" mean in a METAR weather report?

- a) 5 to 7 eighths
- b) 3 to 4 eighths
- c) 8 eighths
- d) 1 to 2 eighths

52. What is the advantage of a turbulent airflow compared to a laminar airflow at an aerofoil with a high angle of attack?

- a) It has a thinner boundary layer
- b) It has no form drag
- c) The separation point moves further forward
- d) It adheres to the aerofoil for a longer time

53. A VOR radial corresponds to the...

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

54. What is the call sign of the aerodrome control?

- a) Airfield
- b) Ground
- c) Tower
- d) Control

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55. 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

56. What ground features should preferably be used for orientation during visual flight?

- a) Rivers, railroads, highways
- b) Farm tracks and creeks
- c) Border lines
- d) Transmission lines and small hills

57. QNE is the...

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

58. The VFR semicircular rules are based on the...

- a) Magnetic course (MC).
- b) True heading (TH).
- c) True course (TC).
- d) Magnetic heading (MH).

59. The connection between middle ear and nose and throat region is called...

- a) Eardrum
- b) Eustachian tube
- c) Inner ear
- d) Cochlea



60. Why is a helicopter's climb initially accelerated after an increase of the pitch angle?

- a) The larger pitch angle causes a decrease and a compression of the airflow until the climb rate corresponds to the induced velocity through the main rotor disc
- b) The inertia of the air increases the effective angle of attack temporarily until an additional component of the climb rate reduces the effective angle of attack again
- c) The initially high airflow increases the rotor thrust until the lower air density reduces the rotor thrust again
- d) The conversion of energetic air into kinetic rotor energy decreases continuously with increasing density altitude

61. What is the purpose of the vertical stabilizer?

- a) Adjustment of longitudinal stability
- b) Compensation of tail rotor stability
- c) Improvement of directional stability
- d) Reduction of manoeuvre stability

62. Electronic devices on board of an aeroplane have influence on the...

- a) Direct reading compass.
- b) Airspeed indicator.
- c) Artificial horizon.
- d) Turn coordinator.

63. What is a latent error?

- a) An error which only has consequences after landing
- b) An error which has an immediate effect on the controls
- c) An error which is made by the pilot actively and consciously
- d) An error which remains undetected in the system for a long time

64. Increasing a helicopter's mass will...

- a) Increase the climb path angle.
- b) Decrease the rate of climb.
- c) Increase the lift coefficient.
- d) Decrease the power available.

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65. Without corrective moves, a helicopter hovering in ground effect in no-wind conditions, will execute...

- a) Pitching motion about the centre
- b) Fast yaw motions
- c) Rolling movements to about 60°
- d) Slight upward and downward movements

66. An altitude of 4500 ft is transmitted as...

- a) Four five zero zero
- b) Four five thousand
- c) Four thousand five zero zero
- d) Four thousand five hundred

67. 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

68. What is the lowest possible VFR flight level if a true course of 181° is selected and a variation of 3° east exists?

- a) FL 065
- b) FL 060
- c) FL 055
- d) FL 050

69. What cylinder arrangement is common in helicopters with piston engines?

- a) Boxer engine
- b) Radial engine
- c) Line engine
- d) V-type engine

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70. Which hazard arises during a helicopter night flight in blowing snow?

- a) Engine monitoring displays are scanned with increased attention
- b) Anti-collision light and rotors can cause the "flicker vertigo"
- c) High partial pressures in the human body can cause hyperventilation or autokinesis
- d) High air pressure and low temperatures can clog the "eustachian tube"

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Response Scheme

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

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