Exam simulation

PPL(A) - Private Pilot License - Air Law

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STUDENT NAME:	DATE AND TIME:

01. (For this questions, use attachment or CAP697 SEP1 Fig. 2.2 Table 2.2.3) Planning a flight from EDWH (Oldenburg Hatten) to EDWF (Leer Papenburg), the following conditions apply: Cruise level = FL 65 Temperature = ISA+20 Cruise weight = 3400 lbs Power setting = 23.0 in. HG @ 2300 RPM What Indicated Airspeed (IAS) and Fuel Flow (FF) can be expected? (2,00 P.) Siehe Anlage 21

Table 2.2.3 **23.0 in. Hg (or full throttle) @ 2,300 rpm**

Off-peak EGT Cruise lean mixture @ cruise weight 3,400 lb

ISA Dev.	Press. Alt.	IOAT		Man. Press.	Fuel Flow		Airspeed	
°C	Feet	°C	°F	In. Hg	PPH	GPH	KIAS	KTAS
-20	0	-3	26	23.0	67.6	11.3	152	144
	2,000	-7	20	23.0	69.7	11.6	152	149
	4,000	-11	13	23.0	72.1	12.0	153	154
	6,000	-15	6	23.0	74.4	12.4	153	158
	8,000	-18	-1	22.4	73.8	12.3	150	160
	10,000	-23	-9	20.7	68.4	11.4	143	157
	12,000	-27	-16	19.2	63.8	10.6	135	153
	14,000	-31	-23	17.8	60.0	10.0	127	148
	16,000	-35	-31	16.4	56.3	9.4	117	141
0	0	17	62	23.0	65.4	10.9	147	145
	2,000	13	56	23.0	67.4	11.2	147	149
	4,000	9	49	23.0	69.4	11.6	148	154
	6,000	5	42	23.0	71.7	12.0	148	159
	8,000	2	35	22.4	71.1	11.9	145	160
	10,000	-3	27	20.7	66.2	11.0	137	157
	12,000	-7	20	19.2	61.8	10.3	129	152
	14,000	-11	13	17.8	58.5	9.8	120	146
	16,000	-15	5	16.4	55.3	9.2	109	137
+20	0	37	98	23.0	63.2	10.5	142	145
	2,000	33	92	23.0	65.1	10.9	143	149
	4,000	29	85	23.0	67.1	11.2	143	154
	6,000	25	78	23.0	69.0	11.5	142	158
	8,000	22	71	22.4	68.5	11.4	140	160
	10,000	17	63	20.7	64.0	10.7	132	156
	12,000	13	56	19.2	60.0	10.0	123	151
	14,000	9	48	17.8	57.1	9.5	113	142
	16,000	-	-	-	-	-	-	-

Figure 2.2 Recommended Cruise Power Settings (continued)

NOTE 1: Full-throttle manifold pressure settings are approximate.

NOTE 2: Shaded areas represent operation with full throttle.

NOTE 3: Fuel flows are to be used for flight planning. Lean

Bildschirmfoto

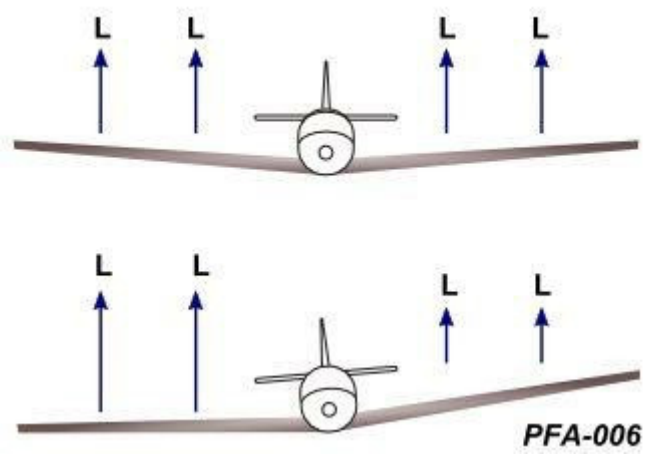
a) IAS = 142 kt FF = 11.5 GPH

b) IAS = 145 kt FF = 11.9 GPH

c) IAS = 158kt FF = 11.5 GPH

d) IAS = 150 kt FF = 12.3 GPH

02. Which constructive feature is shown in the figure? See figure (PFA-006) L: Lift (1,00 P.) Siehe Anlage 4



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

03. What is the meaning of the red range on the airspeed indicator?

a) Speed which must not be exceeded within bumpy air
b) Speed which must not be exceeded with flaps extended
c) Speed which must not be exceeded regardless of circumstances
d) Speed which must not be exceeded in turns with more than 45° bank

04. The term "runway" is defined as a...

a) Round area on an aerodrome prepared for the landing and take-off of aircraft
b) Rectangular area on a land or water aerodrome prepared for the landing and take-off of aircraft.
c) Rectangular area on a land aerodrome prepared for the landing and take-off of helicopters.

05. What is the minimum flight visibility in airspace "C" below FL 100 for an aircraft operating under VFR?

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

06. Which phrase is to be used when a pilot wants the tower to know that he is ready for take-off?

a) Ready for start-up

b) Ready for departure

c) Request take-off

d) Ready

07. What is necessary for the determination of speed (IAS) by the airspeed indicator?

a) The difference between the total pressure and the dynamic pressure

b) The difference between the standard pressure and the total pressure

c) The difference betweeen the total pressure and the static presssure

d) The difference between the dynamic pressure and the static pressure

08. Which statement about induced drag during the horizontal cruise flight is correct?

a) Induced drag has a minimum at a certain speed and increases at higher as well as lower speeds

b) Induced drag has a maximum at a certain speed and decreases at higher as well as lower speeds

c) Induced drag increases with increasing airspeed

d) Induced drag decreases with increasing airspeed

09. 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 : 250000.

b) 1 : 2000000.

c) 1 : 500000

d) 1 : 1000000.

10. How may windshear be recognised in flight?

a) Sudden and apparently baseless change in altitude, airspeed, rate of climb or descent.

b) Sudden and apparently baseless change in heading, turning rate, engine speed or oil temperature

c) Sudden and apparently baseless change of oilpressure, oil temperature, engine speed and altitude

d) Rather unexpected onset of drizzle associated with high stratus clouds following previously clear skies and calm conditions

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

a) Tthe angle between magnetic north and the course line.

b) The direction from an arbitrary point on Earth to the geographic North Pole.

c) The angle between true north and the course line

d) The direction from an arbitrary point on Earth to the magnetic north pole

12. The movement of air flowing apart is called...

a) Convergence

b) Concordence

c) Divergence

d) Subsidence

13. Which of the instruments listed below obtain their readings through pressure measurement?

a) Oil pressure gauge, fuel pressure gauge, manifold pressure gauge, altimeter, vertical speed indicator, airspeed indicator, suction gauge

b) Oil pressure gauge, fuel pressure gauge, fuel quantity gauge, manifold pressure gauge, differential pressure gauge, altimeter

c) Airspeed indicator, vertical speed indicator, altimeter, directional gyro, turn and bank coordinator, oil pressure gauge, fuel pressure gauge

d) Airspeed indicator, vertical speed indicator, altimeter, magnetic compass, oil pressure gauge, fuel pressure gauge

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

a) Span width.

b) Balance arm.

c) Lever

d) Torque

15. Which constructional elements give the wing its profile shape?

a) Rips

b) Planking

c) Spar

d) Tip

16. For a short flight from A to B the pilot extracts the following information from an aeronautical chart: True course: 245°. Magnetic variation: 7° W The magnetic course (MC) equals...

a) 252°

b) 245°.

c) 007°

d) 238°.

17. What is meant by "ground effect"?

a) Increase of lift and increase of induced drag close to the ground

b) Decrease of lift and increase of induced drag close to the ground

c) Decrease of lift and decrease of induced drag close to the ground

d) Increase of lift and decrease of induced drag close to the ground

18. 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) More than 600 NM.

b) Less than 600 NM.

c) More than 300 NM

d) Less than 300 NM

19. Given: Ground speed (GS): 160 kt. True course (TC): 177°. Wind vector (W/WS): 140°/20 kt. The true heading (TH) equals...

a) 169°.

b) 173°

c) 184°

d) 180°.

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

a) Laminar layer at the leading wing areas, turbulent boundary layer at the trailing areas

b) Turbulent boundary layer along the complete upper surface with separated airflow

c) Turbulent layer at the leading wing areas, laminar boundary layer at the trailing areas

d) Laminar boundary layer along the complete upper surface with non-separated airflow

21. An aircraft travels 110 NM within 01:25. The ground speed (GS) equals...

a) 120 km/h.
b) 160 km/h
c) 86 kt.
d) 78 kt.

22. Which type of ice forms by large, supercooled droplets hitting the front surfaces of an aircraft?

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

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

a) The period from the start of the take-off run to the final touchdown when landin
b) The total time from the first aircraft movement until the moment it finally comes to rest at the end of the flight.
c) The period from engine start for the purpose of taking off to leaving the aircraft after engine shutdown. ? the total time f
d) The period from engine start for the purpose of taking off to leaving the aircraft after engine shutdown. ? the total time f

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

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

25. The range of a VOR is affected by...

a) Daylight interference
b) Reflected sky waves.
c) Multipath propagation of the ground wave
d) Transmitter and receiver altitude.

26. What condition has to be met during a Special VFR flight?

a) Visual reference to the terrain

b) Speed not above 115 kt IAS

c) At least 500 m ground visibilty

d) A minimum distance to clouds of 2000 m

27. A light aircraft intends to land behind a commercial airliner belonging to wake turbulence category "medium" or "heavy" on a long runway. How can the wake turbulence of the commercial aircraft be avoided?

a) By making a steep approach and a long landing, touching down behind the touchdown point of the airliner's nose gear

b) By making a steep approach and a very short landing. The light aircraft should be able to stop before reaching the airliner's touchdown point

c) By making a shallow approach and a long landing, touching down behind the touchdown point of the airliner's nose gear

d) By making a shallow approach and a very short landing. The light aircraft should be able to stop before reaching the airliner's touchdown point

28. What does the octane rating or fuel grade describe?

a) Anti-knock rating

b) Flame front speed

c) Ignition timing

d) Combustion temperature

29. How does a balance tab move in relation to the flight control surface that it is coupled with?

a) In the opposite direction

b) At an angle of 90°

c) At an angle of 45°

d) In the same direction

30. Which part of the visual system is responsible for colour vision?

a) Cones

b) Rods

c) Macula

d) Blind spot

31. What devices can be affected by a failure of the electrical system in a helicopter?

a) Fuel quantity indication, radio equipment and altimeter
b) Radio equipment, navigation equipment and magnetic compass
c) Airspeed indicator, altimeter and artificial horizon
d) Radio equipment, navigation equipment and gyros

32. 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

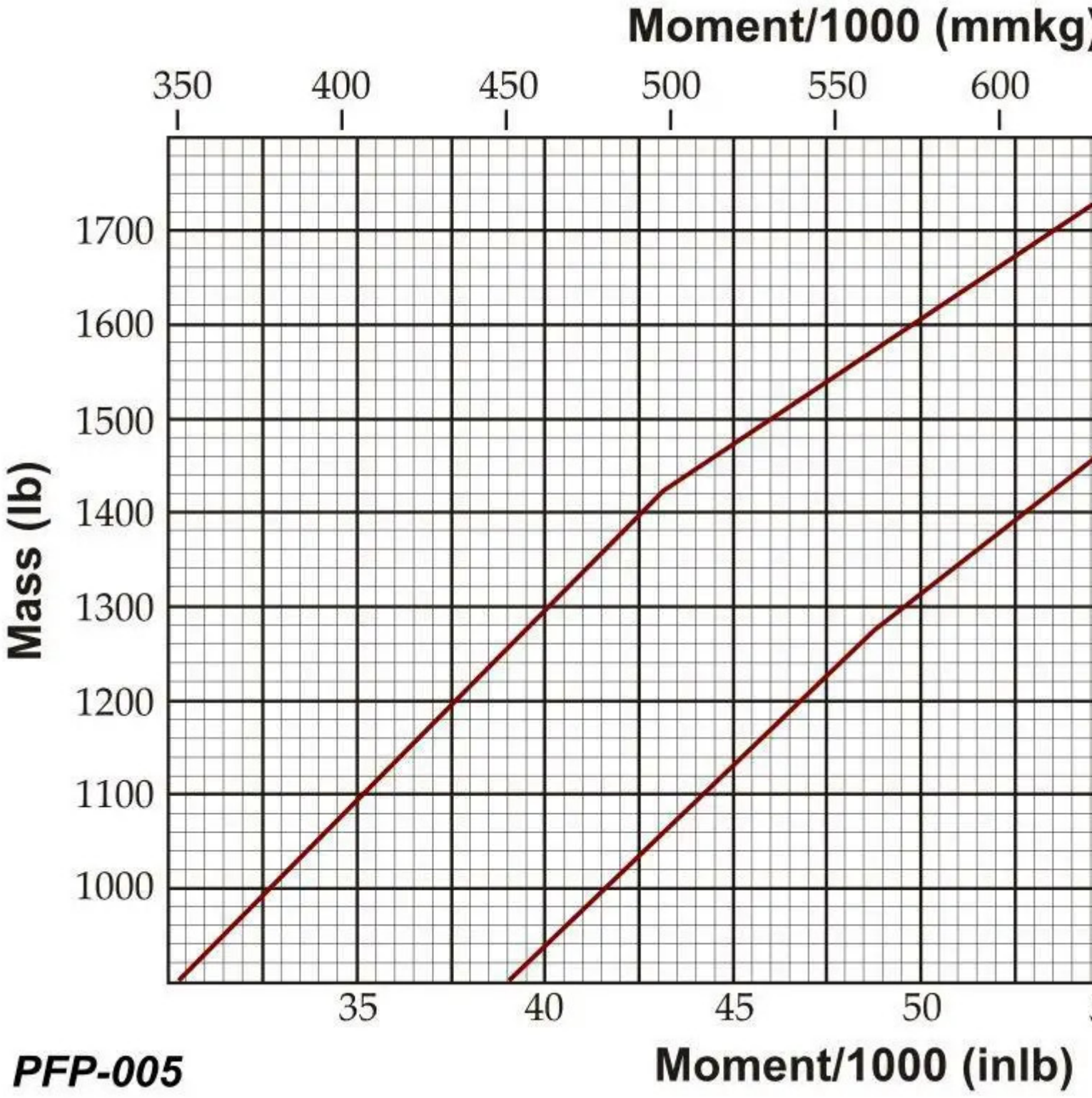
33. Which equipment is needed on board of an aircraft to use a VHF direction finder (VDF)?

a) At least two VHF aerials
b) A VHF radio
c) A relative bearing indicator (RBI)
d) A VDF receiver

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

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

**35. For the purpose of a flight preparation the pilot calculates a total take-off mass of 775 kg and a total moment of 700 n
(PFP-005) (1,00 P.) Siehe Anlage 5**


Moment/1000 (mmkg)
350
400
450
500
550
600
1700
1600
1500
1400
1300
1200
1100
1000
Mass (lb)
35
40
45
50
PFP-005
Moment/1000 (inlb)

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

36. What is indicated by a pattern of longitudinal stripes of uniform dimensions disposed symmetrically about the centerline of a runway?

a) At this point the glide path of an ILS hits the runway

b) Do not touch down before them

c) Do not touch down behind them

d) A ground roll could be started from this position

37. In which way may an altimeter subscale which is set to an incorrect QNH lead to an incorrect altimeter reading?

a) If the subscale is set to a lower than actual pressure, the indication is too high. This may lead to much closer proximity to the ground than intended

b) If the subscale is set to a higher than actual pressure, the indication is too high. This may lead to much closer proximity to the ground than intended

c) If the subscale is set to a lower than actual pressure, the indication is too low. This may lead to much closer proximity to the ground than intended

d) If the subscale is set to a higher than actual pressure, the indication is too low. This may lead to much greater heights above the ground than intended

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

a) The stagnation point moves down

b) The center of pressure moves down

c) The center of pressure moves up

d) The stagnation point moves up

39. The ratio of span and mean chord length is referred to as...

a) Trapezium shape.

b) Tapering

c) Aspect ratio.

d) Wing sweep.

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

a) A climb.

b) A descent.

c) A bank.

d) An inverted flight.

41. How are the flight controls on a small single-engine piston aircraft normally controlled and actuated?

a) Power-assisted through hydraulic pumps or electric motors
b) Hydraulically through hydraulic pumps and actuators
c) Manually through rods and control cables
d) Electrically through fly-by-wire

42. Rotation around the lateral axis is called...

a) Rolling
b) Stalling
c) Yawing
d) Pitching

43. The shortest distance between two points on Earth is represented by a part of...

a) A great circle
b) A small circle.
c) A rhumb line.
d) A parallel of latitude.

44. Which air traffic service is responsible for the safe conduct of flights?

a) ALR (alerting service)
b) FIS (flight information service)
c) ATC (air traffic control)
d) AIS (aeronautical information service)

45. When should turns at low altitudes above villages be avoided with regard to noise abatement procedures?

a) In descent
b) In climb
c) During the approach
d) In horizontal flight

46. In flight, a little smoke emerges from behind the instrument panel. An electrical fire is suspected. Which action, with respect to the pilot's operating manual, should be taken?

a) Turn off the heat

b) Shut down the engine

c) Turn off the master switch

d) Use the fire extinguisher

47. Which danger exists after a heavy rain shower for a landing aircraft?

a) Displacement of the tire slip marking

b) Difficult flare due to glare

c) Longer braking distance due to aquaplaning

d) Decreased braking distance due to aquaplaning

48. Immediately after lift-off, a microburst is entered inadvertently. Which action might avoid an unintentional descent?

a) Set maximum power, maintain present aircraft configuration, climb at the best rate of climb speed

b) Set maximum power, retract landing gear and flaps, pick up speed and perform a left or a right turn in an attempt to leave the area of the microburst on the shortest way

c) Set maximum power, retract landing gear and flaps, increase pitch until attaining optimum climb speed

d) Set maximum power, maintain present aircraft configuration, pick up speed in an attempt to leave the area of the microburst as fast as possible

49. The EOBT (estimated off-block time) is specified in the ATS flight plan as...

a) Coordinated Universal Time (UTC)

b) Standard Time (ST)

c) Local Mean Time (LMT).

d) Central European Time (CET).

50. How should a power decrease be executed on a constant-speed propeller, provided that no other procedure is described in the flight manual?

a) 1) Decrease RPM 2) Decrease manifold pressure

b) 1) Decrease manifold pressure 2) Increase RPM

c) 1) Decrease RPM 2) Increase manifold pressure

d) 1) Decrease manifold pressure 2) Decrease RPM

51. What cloud sequence can typically be observed during the passage of a warm front?

a) In coastal areas during daytime wind from the coast and forming of cumulus clouds, dissipation of clouds during evening and night

b) Wind becoming calm, dissipation of clouds and warming during summer; formation of extended high fog layers during winter

c) Squall line with showers of rain and thunderstorms (Cb), gusting wind followed by cumulus clouds with isolated showers of rain

d) Cirrus, thickening altostratus and altocumulus clouds, lowering cloud base with rain, nimbostratus

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

a) 18000 ft

b) 11000 ft

c) 11000 m

d) 36000 m

53. What is an indication for a macho attitude?

a) Careful walkaround procedure

b) Comprehensive risk assessment when faced with unfamiliar situations

c) Risky flight maneuvers to impress spectators on ground

d) Quick resignation in complex and critical situations

54. During an unaccelerated flight...

a) Drag equals lift and thrust equals gravity.

b) Thrust equals the sum of drag and gravity.

c) Thrust equals lift and drag equals gravity.

d) Thrust equals drag and lift equals gravity.

55. What minimum coverage with ice or snow must be given to call a runway "contaminated"?

a) 50 %

b) 25 %

c) 10 %

d) 75 %

56. What action should be taken when entering a windshear? 1. Reduce speed 2. Retract gear and flaps 3. Maintain current configuration 4. Adjust thrust

a) 2 and 4

b) 1 and 2

c) 1 and 3

d) 3 and 4

57. 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) 12° to the right

c) 6° to the right

d) 9° to the right

58. Wake turbulences develop during take-off just as the aeroplane...

a) Reaches an altitude of 15 ft.

b) Lifts off with the main gear.

c) Lifts off with the front gear.

d) Accelerates

59. How should a power increase be executed on a constant-speed propeller, provided that no other procedure is described in the flight manual?

a) 1) Decrease manifold pressure 2) Increase RPM

b) 1) Decrease RPM 2) Increase manifold pressure

c) 1) Increase manifold pressure 2) Increase RPM

d) 1) Increase RPM 2) Increase manifold pressure

60. Full deflection of the course deviation indicator (CDI) means that the aircraft is located at least...

a) 2 NM beside the selected course.

b) 10 NM beside the selected course.

c) 2° beside the selected course.

d) 10° beside the selected course.

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

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

62. 1000 ft equal...

a) 30 km
b) 3000 m.
c) 300 m.
d) 30 m.

63. The DME reading is a...

a) Ground distance.
b) Air range
c) Radial distance.
d) Slant range.

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

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

65. What does a readability of 2 indicate?

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

66. What extinguishing agent is the least suitable for an aircraft fire?

a) Powder
b) Halon
c) Water
d) Foam

67. Which abbreviation is used for the term "obstacle"?

a) OBTC
b) OBST
c) OST
d) OBS

68. How can a wind shear encounter in flight be avoided?

a) Avoid take-off and landing during the passage of heavy showers or thunderstorms
b) Avoid areas of precipitation, particularly during winter, and choose low flight altitudes
c) Avoid take-offs and landings in mountainous terrain and stay in flat country whenever possible
d) Avoid thermally active areas, particularly during summer, or stay below these areas

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

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

70. Which parts of an aircraft mainly affect the generation of induced drag?

a) The front part of the fuselage.
b) The wing tips
c) The lower part of the gear.
d) The outer part of the ailerons

Exam simulation

PPL(A) - Private Pilot License - Air Law

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Response Scheme

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

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