

Simulazione di Esame

Performance and flight planning - PPL(A) English - Private Pilot License (Aircraft), 70 domande in 70 minuti!



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NOME ALLIEVO:

DATA & ORA:

01. Which area could be crossed with certain restrictions?

- a) No-fly zone
- b) Restricted area
- c) Prohibited area
- d) Dangerous area

02. The "swiss cheese model" can be used to explain the...

- a) Error chain.
- b) Procedure for an emergency landing.
- c) Optimal problem solution.
- d) State of readiness of a pilot.

03. (For this questions, use attachment or CAP697 SEP1 Fig. 2.2 Table 2.2.3) Planning a flight from EDWF (Leer Papenburg) to EDWH (Oldenburg Hatten), the following conditions apply: Cruise level = FL 75 Temperature = ISA Cruise weight = 3400 lbs Power setting = 23.0 in. HG @ 2300 RPM Determine True Airspeed (TAS) and Fuel Flow (FF): (2,00 P.) Siehe Anlage 21

- a) TAS = 145 kt FF = 71.1 GPH
- b) TAS = 160 kt FF = 12.3 GPH
- c) TAS = 160 kt FF = 11.9 GPH
- d) TAS = 145 kt FF = 11.9 GPH

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

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

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

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

06. The majority of aviation accidents are caused by...

- a) Technical failure
- b) Meteorological influences.
- c) Geographical influences.
- d) Human failure.

07. Pressure compensation on an wing occurs at the...

- a) Wing roots
- b) Wing tips.
- c) Trailing edge
- d) Leading edge.

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

- a) $+5^{\circ}$ to -10° C
- b) 0° to -12° C
- c) -20° to -40° C
- d) $+20^{\circ}$ to -5° C

09. Wet snow on a runway can lead to...

- a) An increase in lift.
- b) A decrease in lift.
- c) Reduced rolling resistance during take-off.
- d) Increased rolling resistance during take-off.

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10. For a take-off from runway 22 and a reported wind of 250°/10 kt, the longitudinal wind component equals...

- a) 9 kt tailwind
- b) 5 kt tailwind.
- c) 9 kt headwind.
- d) 9 kt headwind.

11. What pattern can be found at the stagnation point?

- a) The boundary layer starts separating on the upper surface of the profile
- b) The laminar boundary layer changes into a turbulent boundary layer
- c) All aerodynamic forces can be considered as attacking at this single point
- d) Streamlines are divided into airflow above and below the profile

12. What conditions are mandatory for the formation of thermal thunderstorms?

- a) Conditionally unstable atmosphere, low temperature and low humidity
- b) Absolutely stable atmosphere, high temperature and high humidity
- c) Absolutely stable atmosphere, high temperature and low humidity
- d) Conditionally unstable atmosphere, high temperature and high humidity

13. Which of the stated wind phenomena will increase in speed since its path is narrowed by mountains?

- a) Bora
- b) Mistral
- c) Scirocco
- d) Passat

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

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

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15. Which point on the aerofoil is represented by number 4? See figure (PFA-009) (1,00 P.) Siehe Anlage 2

- a) Center of pressure
- b) Separation point
- c) Transition point
- d) Stagnation point

16. 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

17. Which factor can lead to human error?

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

18. Regarding the communication model, how can the use of the same code during radio communication be ensured?

- a) By the use of radio phraseology
- b) By using radios certified for aviation use only
- c) By the use of proper headsets
- d) By a particular frequency allocation

19. What is the purpose of "interception lines" in visual navigation?

- a) To visualize the range limitation from the departure aerodrome
- b) They help to continue the flight when flight visibility drops below VFR minima
- c) To mark the next available en-route airport during the flight
- d) They are used as easily recognizable guidance upon a possible loss of orientation

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20. Primary fuselage structures of wood or metal planes are usually made up by what components?

- a) Girders, ribs and stringers
- b) Frames and stringer
- c) Ribs, frames and covers
- d) Covers, stringers and forming parts

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

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

22. 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 speed.
- d) The aircraft flying at higher altitude.

23. Which altitude is transmitted by the transponder in mode C?

- a) QFE altitude
- b) Pressure altitude
- c) QNH altitude
- d) Radio altitude

24. What process causes latent heat being released into the upper troposphere?

- a) Descending air across widespread areas
- b) Stabilisation of inflowing air masses
- c) Cloud forming due to condensation
- d) Evaporation over widespread water areas

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25. Lower-than-standard temperature may lead to...

- a) A blockage of the Pitot tube by ice, freezing the altimeter indication to its present value
- b) An altitude indication which is too low
- c) An altitude indication which is too high.
- d) A correct altitude indication as long as the altimeter subscale is set to correct for non-standard temperature.

26. Deflecting the rudder to the left causes...

- a) Pitching of the aircraft to the right.
- b) Yawing of the aircraft to the right
- c) Yawing of the aircraft to the left.
- d) Pitching of the aircraft to the left

27. 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.

28. Exceeding the maximum allowed aircraft mass is...

- a) Not permissible and essentially dangerous
- b) Only relevant if the excess is more than 10 %
- c) Compensated by the pilot's control inputs
- d) Exceptionally permissible to avoid delays.

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

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

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30. What are the effects of wet grass on the take-off and landing distance?

- a) Decrease of the take-off distance and increase of the landing distance
- b) Increase of the take-off distance and increase of the landing distance
- c) Decrease of the take-off distance and decrease of the landing distance
- d) Increase of the take-off distance and decrease of the landing distance

31. A single-engine piston and a turboprop aeroplane are approaching each other opposite at the same altitude. Which aeroplane has to change its track to avoid a collision?

- a) The turboprop aircraft has to give way to the single-engine piston aircraft
- b) Both aircraft have to alter their tracks to the left
- c) Both aircraft have to alter their tracks to the right
- d) The single-engine piston aircraft has to give way to the turboprop aircraft

32. During final approach, the glider pilot realizes a very bumpy surface on a selected off field landing site. What technique may be recommended for landing?

- a) Touch down with minimum speed, compensate different ground levels with power lever
- b) Approach with increased speed, push elevator upon first ground contact
- c) Touch down with minimum speed, keep elevator pulled until full stop
- d) Approach with increased speed, avoid using wheel brakes

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

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

34. An aircraft is flying from 'A' to 'B' (distance 220 NM) at an average ground speed (GS) of 120 kt. It departs 'A' at 1200 UTC. After 70 NM along the course from 'A', the aircraft is 5 min ahead of the planned schedule. Using the actual GS, what is the revised estimated time of arrival (ETA) at B?

- a) 1335 UTC
- b) 1340 UTC
- c) 1345 UTC
- d) 1330 UTC

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35. How does a laminar boundary layer differ from a turbulent boundary layer?

- a) The laminar boundary layer produces lift, the turbulent boundary layer produces drag
- b) The turbulent boundary layer is thicker and provides less skin-friction drag
- c) The laminar boundary layer is thinner and provides more skin-friction drag
- d) The turbulent boundary layer can follow the airfoil camber at higher angles of attack

36. Under what conditions may class D airspace be entered with a radio failure?

- a) Approval has been granted before
- b) There are other aircraft in the aerodrome circuit
- c) It is the aerodrome of departure
- d) It is the destination aerodrome

37. 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 higher, IAS increases
- c) Path is lower, IAS decreases
- d) Path is lower, IAS increases

38. The occurrence of a vertigo is most likely when moving the head...

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

39. How does the pilot prepare for a VFR flight over a large distance of water, when it is unlikely that land can be reached in case of an engine failure?

- a) File a flight plan including the exact way-points
- b) Be prepared to fly with transponder only
- c) Carry life vests or a life raft for all occupants.
- d) Maintain continuous radio contact with ATC.

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

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

41. How does wind affect the take-off performance?

- a) Tailwind aids the aircraft in overcoming the initial drag at the commencement of the take-off roll. The take-off distance will decrease
- b) Tailwind reduces the relative wind on the airfoil. The take-off distance will increase
- c) Headwind causes an increased airflow around the wing. The take-off distance will increase
- d) Headwind imposes an increased drag on the aircraft. The take-off distance will increase

42. (For this questions use attachment or CAP697 SEP1 Fig. 2.2 Table 2.2.3) For planning a VFR flight, the following data are given: Flight time with planning "overhead-overhead" = 2h 43min Pressure Altitude = 6.500 ft Temperature = ISA-20 Power setting = 2300 RPM Taxi Fuel = 2 USG Additional time for climb = 7 min, Additional time for approach and landing = 10 min The reserve fuel has to be 30% of trip fuel. Determine the minimum block fuel: (2,00 P.) Siehe Anlage 21

- a) 47.3 USG
- b) 50.4 USG
- c) 43.8 USG
- d) 39.2 USG

43. What are the minimum requirements among others to acquire a rating for VFR night flights?

- a) At least 10 additional flight hours at night, three of them with a flight instructor with at least 1 hour cross-country flight plus 5 solo take-offs and full-stop landings
- b) At least 5 additional flight hours at night, four of them with a flight instructor with at least 1 hour cross-country flight plus 5 solo take-offs and full-stop landings
- c) At least 5 additional flight hours at night, three of them with a flight instructor with at least 1 hour cross-country flight plus 5 solo take-offs and full-stop landings
- d) At least 5 additional flight hours at night, three of them with a flight instructor with at least 1 hour cross-country flight plus 10 solo take-offs and full-stop landings

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44. The aerodynamic rudder balance...

- a) Improves the rudder effectiveness.
- b) Reduces the control surfaces
- c) Reduces the control stick forces
- d) Delays the stall.

45. Under which circumstances may a runway be considered to be contaminated?

- a) When more than 25 % of the runway surface area within the required length and width being used is covered by water, slush, snow or ice more than 3 mm deep
- b) When 75 % of the required runway length and width are covered by contaminants such as snow, frost, ice or sand
- c) When more than 50 % of the runway surface area within the required length and width being used is covered by water, slush, snow or ice more than 3 mm deep
- d) When more than 50 % of the required runway length and width are covered by contaminants such as snow, frost, ice or sand

46. The progress of an electromagnetic oscillation can be described by the...

- a) Phase angle
- b) Amplitude angle.
- c) Wave angle.
- d) Frequency angle.

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

- a) Cones
- b) Rods
- c) Macula
- d) Blind spot

48. The "Certificate of Airworthiness" is issued by the state...

- a) In which the aircraft is registered.
- b) Of the residence of the owner.
- c) In which the aircraft is constructed.
- d) In which the airworthiness review is done.

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49. What weather is likely to be experienced during "Foehn" in the Bavarian area close to the alps?

- a) High pressure area overhead Biskaya and low pressure area in Eastern Europe
- b) Cold, humid downhill wind on the lee side of the alps, flat pressure pattern
- c) Nimbostratus cloud in the northern alps, rotor clouds at the windward side, warm and dry wind
- d) Nimbostratus cloud in the southern alps, rotor clouds at the lee side, warm and dry wind

50. The term "moment" with regard to a mass and balance calculation is referred to as...

- a) Sum of a mass and a balance arm.
- b) Quotient of a mass and a balance arm.
- c) Difference of a mass and a balance arm
- d) Product of a mass and a balance arm.

51. 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

52. A pilot wants to take off on runway 36, the reported wind is 240 degrees, 12 knots. What is the value of the wind components acting on the aircraft on take-off and landing?

- a) Crosswind from the right 10.4 kt. Tailwind 6 kt.
- b) Crosswind from the left 10.4 kt. Tailwind 6 kt.
- c) Crosswind from the left 6 kt. Tailwind 10.4 kt.
- d) Crosswind from the right 6 kt. Headwind 10.4 kt.

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

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

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54. Weather phenomena are most common to be found in which atmospheric layer?

- a) Stratosphere
- b) Tropopause
- c) Thermosphere
- d) Troposphere

55. The term "steady flight" is defined as...

- a) Flight with a steady power setting without changing course
- b) Climb or descent with a constant climb or descent rate in calm weather conditions.
- c) Unaccelerated flight. The four forces thrust, drag, lift, and weight are in equilibrium.
- d) Flight in smooth air without turbulence and a perfectly trimmed aircraft.

56. 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

57. 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) 6750 ft.
- d) 6250 ft.

58. 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

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59. A heading of 285 degrees is correctly transmitted as...

- a) Two eight five.
- b) Two eight five hundred.
- c) Two hundred eight five.
- d) Two hundred eighty-five.

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

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

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

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

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

63. 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.

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64. Regarding the type of cloud, precipitation is classified as...

- a) Light and heavy precipitation.
- b) Showers of snow and rain
- c) Prolonged rain and continuous rain.
- d) Rain and showers of rain.

65. What is the meaning of the abbreviation "TRA"? (

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

66. 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) Falling pressure in front of the warm front, constant pressure within the warm sector, rising pressure behind the cold front
- c) Falling pressure in front of the warm front, constant pressure within the warm sector, falling pressure behind the cold front
- d) Rising pressure in front of the warm front, rising pressure within the warm sector, falling pressure behind the cold front

67. Which statement about lift and angle of attack is correct?

- a) Too large angles of attack can lead to an exponential increase in lift
- b) Increasing the angle of attack results in less lift being generated by the aerofoil
- c) Increasing the angle of attack too far may result in a loss of lift and an airflow separation
- d) Decreasing the angle of attack results in more drag being generated by the aerofoil

68. What does the term "Red-out" mean?

- a) "Red vision" during negative g-loads
- b) Rash during decompression sickness
- c) Anaemia caused by an injury
- d) Falsified colour perception during sunrise and sunset

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

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

70. The "spread" is defined as...

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

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Schema Risposte

Confronta le risposte fornite con il seguente schema e segna il tuo punteggio!

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