Exam simulation

SPL - Sailplane Pilot License - Flight Performance and Planning

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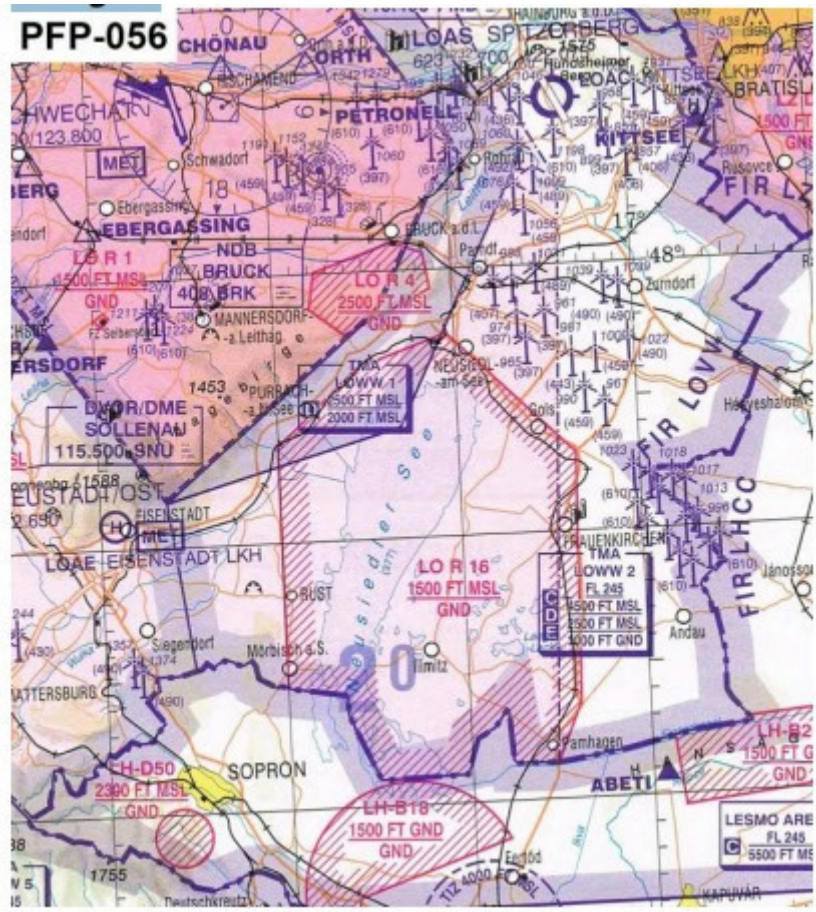
STUDENT NAME:	DATE AND TIME:

01. What has to be considered when operating a sailplane with water ballast?

a) Best glide angle decreases
b) Significant CG shifts
c) Best glide speed decreases
d) It should stay below freezing level

02. The upper limit of LO R 16 equals... See annex (PFP-056)



a) 1.500 ft GND
b) 1 500 ft MSL
c) 1 500 m MSL
d) FL150

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

a) Cold, humid downhill wind on the lee side of the alps, flat pressure pattern

b) Nimbostratus cloud in the southern alps, rotor clouds at the lee side, warm and dry wind

c) High pressure area overhead Biscay and low pressure area in Eastern Europe

d) Nimbostratus cloud in the northern alps, rotor clouds at the windward side, warm and dry wind

04. What factors are required for the formation of precipitation in clouds?

a) The presence of an inversion layer

b) Moderate to strong updrafts

c) Calm winds and intensive sunlight insolation

d) High humidity and high temperatures

05. 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 : 500000

b) 1 : 1000000

c) 1 : 250000

d) 1 : 2000000

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

a) Compensated by the pilot's control inputs

b) Only relevant if the excess is more than 10 %

c) Exceptionally permissible to avoid delays

d) Not permissible and essentially dangerous

07. How often shall a blind transmission be made?

a) Two times

b) Four times

c) Three times

d) One time

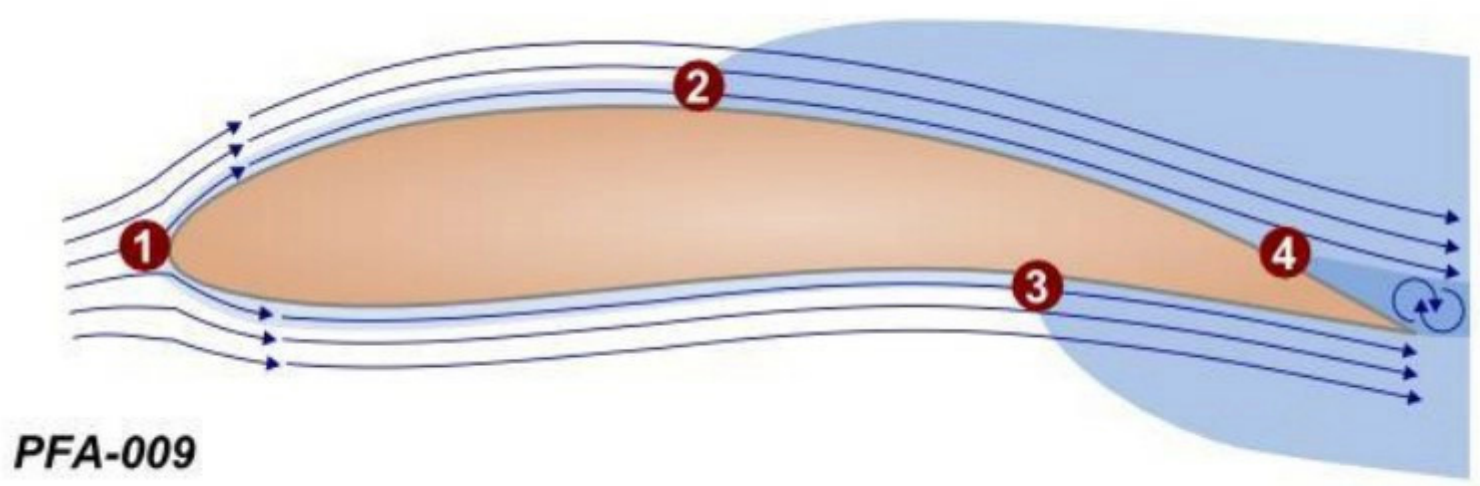
08. The center of gravity (CG) defines...

a) The point on the longitudinal axis or its extension from which the centers of gravity of all masses are referenced
b) The point through which the force of gravity is said to act on a mass
c) The distance from the datum to the position of a mass
d) The product of mass and balance arm

09. Rudder deflections result in a turn of the aeroplane around the...

a) Rudder axis
b) Vertical axis
c) Lateral axis
d) Longitudinal axis

10. Which point on the aerofoil is represented by number 1? See figure (PFA-009)



PFA-009

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

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

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

12. What is the function of the static rudder balance?

a) To prevent control surface flutter
b) To trim the controls almost without any force
c) To increase the control stick forces
d) To limit the control stick forces

13. The pressure at MSL in ISA conditions is...

a) 1013.25 hPa
b) 113.25 hPa
c) 15 hPa
d) 1123 hPa

14. Before a winch launch, you detect a light tailwind. What has to be considered?

a) Roll until lift-off will take a little longer, watch speed
b) A weaker rated-brake-point can be used, load will be smaller
c) Roll until lift-off will be shorter since tailwind is pushing from behind
d) To reach more height, full pull on the elevator after lift-off

15. During an approach the aeroplane experiences a windshear with a decreasing headwind. If the pilot does not make any corrections, how do the approach path and the indicated airspeed (IAS) change?

a) Path is higher, IAS increases
b) Path is lower, IAS decreases
c) Path is lower, IAS increases
d) Path is higher, IAS decreases

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

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

17. What does the abbreviation "FIR" stand for?

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

18. What is the true course (TC) from Uelzen (EDVU) (52°59'N, 10°28'E) to Neustadt (EDAN) (53°22'N, 011°37'E)?

a) 241°
b) 055°
c) 235°
d) 061°

19. Given: WCA: -012°; TH: 125°; MC: 139°; DEV: 002°E What are: TC, MH and CH?

a) TC: 113°. MH: 127°. CH: 129°

b) TC: 137°. MH: 127°. CH: 125°

c) TC: 137°. MH: 139°. CH: 125°

d) TC: 113°. MH: 139°. CH: 129°

20. During a cross-country flight, visual meteorological conditions tend to become below minimum conditions. To continue the flight according to minimum visual conditions, the pilot decides to...

a) Continue the flight referring to sufficient forecasts

b) Turn back due to sufficient visual meteorological conditions along the previous track

c) Continue the flight using radio navigational features along the track

d) Continue the flight using navigational aid by ATC

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

a) Direct reading compass

b) Airspeed indicator

c) Turn coordinator

d) Artificial horizon

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

a) 180°

b) 173°

c) 169°

d) 184°

23. Clouds are basically distinguished by what types?

a) Thunderstorm and shower clouds

b) Cumulus and stratiform clouds

c) Stratiform and ice clouds

d) Layered and lifted clouds

24. Where does the inclination reach its lowest value?

a) At the geographic equator

b) At the magnetic equator

c) At the geographic poles

d) At the magnetic poles

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

a) Inside the airplane cabin

b) Of undisturbed airflow

c) Resulting from orderly flow of air particles

d) Sensed by the pitot tube

26. Unless the aircraft is equipped and certified accordingly...

a) Flight into forecast icing conditions is prohibited. Should the aircraft enter an area of icing conditions inadvertently, the flight may be continued as long as visual meteorological conditions are maintained

b) Flight into known or forecast icing conditions is only allowed as long as it is ensured that the aircraft can still be operated without performance degradation

c) Flight into known or forecast icing conditions is prohibited. Should the aircraft enter an area of icing conditions inadvertently, it should be left without delay

d) Flight into areas of precipitation is prohibited

27. 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

28. The center of pressure is the theoretical point of origin of...

a) Only the resulting total drag

b) Gravity forces of the profile

c) All aerodynamic forces of the profile

d) Gravity and aerodynamic forces

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

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

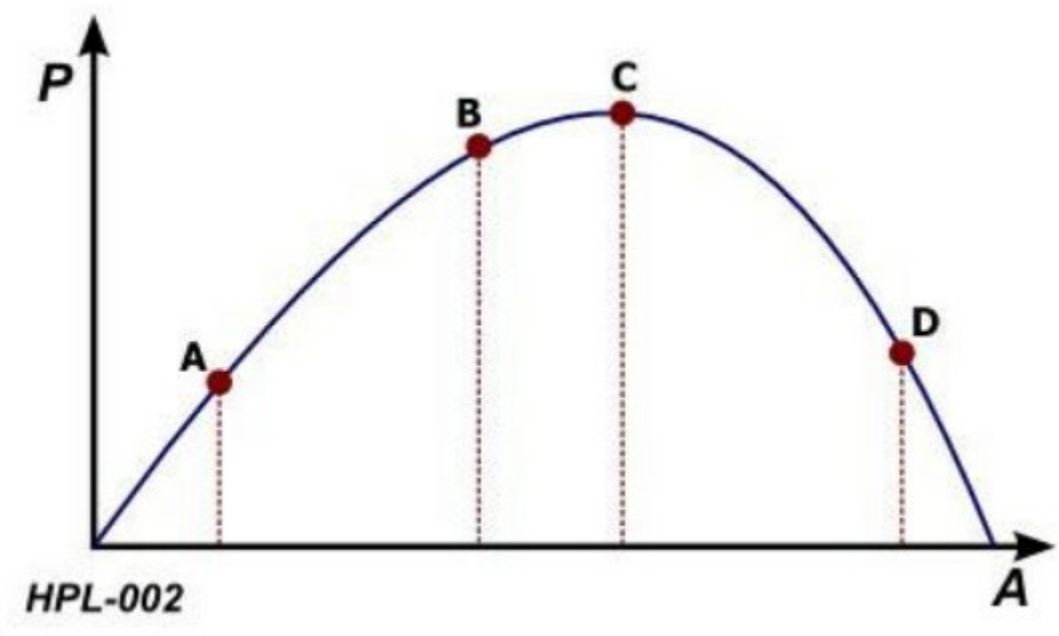
30. What wind is reported as 225/15 ?

a) North-east wind with 15 kt
b) South-west wind with 15 kt
c) South-west wind with 15 km/h
d) North-east wind with 15 km/h

31. A vertical speed indicator measures the difference between...

a) Total pressure and static pressure
b) Dynamic pressure and total pressure
c) Instantaneous static pressure and previous static pressure
d) Instantaneous total pressure and previous total pressure

32. At which point in the diagram will a pilot find himself to be overstrained? See figure (HPL-002) P = Performance A = Arousal / Stress



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

33. 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.

34. Given: TC: 179°; WCA: -12°; VAR: 004° E; DEV: +002° What are MH and MC?

a) MH: 163°. MC: 175°
b) MH: 167°. MC: 161°
c) MH: 163°. MC: 161°
d) MH: 167°. MC: 175°

35. Which answer is correct with regard to separation in airspace "E"?

a) VFR traffic is not separated from any other traffic

b) VFR traffic is separated only from IFR traffic

c) VFR traffic is separated from VFR and IFR traffic

d) IFR traffic is separated only from VFR traffic

36. What is the correct phrase with respect to wake turbulence to indicate that a light aircraft is following an aircraft of a higher wake turbulence category?

a) Caution wake turbulence

b) Be careful wake winds

c) Danger jet blast

d) Attention propwash

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

a) Altocumulus

b) Cumulonimbus

c) Nimbostratus

d) Cirrostratus

38. What is the correct course of action when experiencing a radio failure in class D airspace?

a) The flight has to be continued above 5000 feet complying with VFR flight rules or the airspace has to be left by the shortest route

b) The flight has to be continued above 5000 feet complying with VFR flight rules or the airspace has to be left using a standard routing

c) The flight has to be continued according to the last clearance complying with VFR rules or the airspace has to be left by the shortest route

d) The flight has to be continued according to the last clearance complying with VFR flight rules or the airspace has to be left using a standard routing

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

a) Four five thousand

b) Four five zero zero

c) Four thousand five zero zero

d) Four thousand five hundred

40. 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 higher 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 lower than actual pressure, the indication is too low. This may lead to much closer proximity to the ground than intended

c) 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

d) 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

41. What is the distance between the parallels of latitude 48°N and 49°N along a meridian line?

a) 60 NM

b) 111 NM

c) 1 NM

d) 10 NM

42. What process results in the formation of "advection fog"?

a) Cold, moist air is being moved across warm ground areas

b) Cold, moist air mixes with warm, moist air

c) Prolonged radiation during nights clear of clouds

d) Warm, moist air is moved across cold ground areas

43. A construction made of frames and stringer with a supporting skin is called...

a) Honeycomb structure

b) Wood- or mixed construction

c) Semi-monocoque construction

d) Grid construction

44. 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) That the aircraft does not exceed the maximum permissible airspeed during a descent

b) Both stability and controllability of the aircraft

c) That the aircraft does not tip over on its tail while it is being loaded

d) That the aircraft does not stall

45. Which phrase is to be repeated three times before transmitting an urgency message?

a) Mayday
b) Urgent
c) Pan Pan
d) Help

46. During an approach the aeroplane experiences a windshear with an increasing headwind. If the pilot does not make any corrections, how do the approach path and the indicated airspeed (IAS) change?

a) Path is lower, IAS increases
b) Path is higher, IAS decreases
c) Path is higher, IAS increases
d) Path is lower, IAS decreases

47. Visual illusions are mostly caused by...

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

48. Is it possible to enter airspace C with a glider plane?

a) Yes, but only with transponder activated
b) No
c) With restrictions, in case of less air traffic
d) Yes, but only with approval of the respective ATC unit

49. What effect is referred to as "adverse yaw"?

a) Aileron operation results in a yaw to the desired side due to less drag at the down-deflected aileron
b) Rudder operation results in a rolling moment to the opposite side due to more lift generated by the faster moving wing
c) Aileron operation results in a yaw to the opposite side due to more drag at the up-deflected aileron
d) Aileron operation results in a yaw to the opposite side due to more drag at the down-deflected aileron

50. Times are transmitted as...

a) Local time

b) Time zone time

c) UTC

d) Standard time

51. Which is the purpose of the altimeter subscale?

a) To correct the altimeter reading for system errors

b) To reference the altimeter reading to a predetermined level such as mean sea level, aerodrome level or pressure level 1013.25 hPa

c) To set the reference level for the altitude decoder of the transponder

d) To adjust the altimeter reading for non-standard temperature

52. A plane flying below an extended Cumulus cloud developing into a thunderstorm, the glider plane quickly approaches the cloud base. What actions have to be taken by the glider pilot?

a) Extend spoiler flaps within speed limits, leave thermal lift area with maximum permissible speed

b) Fasten seat belts, be aware of severe gust during further thermaling

c) Reduce to minimum speed, leave thermal lift area in a flat turn

d) Climb into thunderstorm cloud, continue flight using instruments

53. What cloud type does the picture show? See figure (MET-004).

a) Altocumulus
b) Cirrus
c) Cumulus
d) Stratus

54. During airtow, in a turn the glider plane gets into an outward off-set position. What action should be taken by the glider pilot?

a) Return glider plane to a position behind towing plane by a smaller curve radius using strong inputs on rudder pedals
b) Take up same bank angle as towing plane and return glider plane to a position behind towing plane using rudder pedals
c) Bring back glider plane to intended turning attitude using rudder and ailerons, extend spoiler flaps to reduce speed
d) Initiate sideslip and let glider plane be pushed back to a position behind towing plane by increased drag

55. How is the balance of forces affected during a turn?

a) A lower lift force compensates for a lower net force as compared to level flight

b) Lift force must be increased to compensate for the sum of centrifugal and gravitational force

c) The horizontal component of the lift force during a turn is the centrifugal force

d) The net force results from superposition of gravity and centripetal forces

56. During flight close to aerodrome in about 250 m AGL you encounter strong descent and go for a safety landing. What speed should be flown when heading towards the airfield?

a) Best glide speed plus additionals for downdrafts and wind

b) Best glide speed

c) Minimum rate of descent speed

d) Maximum manoeuvering speed VA

57. What situation is called "over-development" in a weather report?

a) Change from blue thermals to cloudy thermals during the afternoon

b) Development of a thermal low to a storm depression

c) Vertical development of Cumulus clouds to rain showers

d) Widespread spreading of Cumulus clouds below an inversion layer

58. After landing, you realize you lost your pen which might have fallen down in the cockpit of the sailplane. What has to be considered?

a) Lighter, loose bodies in the fuselage can be considered uncritical

b) Before next take-off, the cockpit has to be firmly inspected for loose bodies

c) A flight without a pen at hand is not permitted

d) Succeeding pilots have to be informed about that

59. The balance arm is the horizontal distance between...

a) The C.G. of a mass and the rear C.G. limit

b) The front C.G. limit and the datum line

c) The front C.G. limit and the rear C.G. limit

d) The C.G. of a mass and the datum line

60. Extensive high pressure areas can be found throughout the year ...

a) In tropical areas, close to the equator

b) In areas showing extensive lifting processes

c) Over oceanic areas at latitudes around 30°N/S

d) In mid latitudes along the polar front

61. In straight and level flight with constant performance of the engine, the angle of attack at the wing is...

a) Smaller than in a descent

b) Greater than in a climb

c) Greater than at take-off

d) Smaller than in a climb

62. During approach for landing with strong crosswind, how should the turn from base to final be flown?

a) Turn with maximum 60° bank, carefully watch speed and yaw string, track correction after overshoot

b) Maximum 30° bank, use rudder to early align sailplane with final track

c) Maximum 60° bank, use rudder to early align sailplane with final track

d) Turn with maximum 30° bank, carefully watch speed and yaw string, track correction after overshoot

63. The holder of an SPL license or LAPL(S) license completed a total of 9 winch launches, 4 launches in aero-tow and 2 bungee launches during the last 24 months. What launch methods may the pilot conduct as PIC today?

a) Winch and bungee.

b) Winch, bungee and aero-tow.

c) Winch and aero-tow.

d) Aero-tow and bungee.

64. A glider's trim lever is used to...

a) Reduce stick force on the elevator

b) Reduce stick force on the ailerons

c) Reduce stick force on the rudder

d) Reduce the adverse yaw

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

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

66. Which kinds of drag contribute to total drag?

a) Interference drag and parasite drag
b) Induced drag and parasite drag
c) Induced drag, form drag, skin-friction drag
d) Form drag, skin-friction drag, interference drag

67. The center of gravity has to be located...

a) Behind the rear C.G. limit
b) In front of the front C.G. limit
c) Right of the lateral C.G. limit
d) Between the front and the rear C.G. limit

68. A gliding plane is about to pitch down due to stall. What rudder input can prevent nose-dive and spin?

a) Ailerons neutral, rudder strongly kicked to lower wing
b) Release elevator, rudder opposite to lower wing
c) Keep airplane in level flight using rudder pedals
d) Slightly pull the elevator, ailerons opposite to lower wing

69. 1000 ft equal...

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

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

a) ATC (air traffic control)

b) AIS (aeronautical information service)

c) ALR (alerting service)

d) FIS (flight information service)

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Response Scheme

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

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

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Response form

Use this form to mark your answers

01:	02:	03:	04:
05:	06:	07:	08:
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