Examination Center DGAC

Examination Date _____

Name _____

Firstname _____

Birthday _____

1 Which of the following statements concerning barotrauma are correct? (1.00 P.)

[A] It is caused by an increase in the partial pressure of oxygen associated with a decrease in altitude

[B] It is mainly associated with a sink rate which exceeds the ability of the body to balance its internal pressures

[C] It is more likely to occur during ascent then during a rapid descent

[D] It is caused by pressure differentials between gases in hollow cavities of the body and the ambient pressure

2 With regard to decompression sickness associated with flight, we know that: (1.00 P.)

[A] age, obesity and scuba diving are risk factors

[B] gender is the prime risk factor, with two out of every three women being sensitive to it

[C] physical activity after decompression reduces the risks of decompression sickness symptoms

[D] scuba diving does not pose any problem for a subsequent flight

3 The procedure to be followed in the event of decompression when flying above 10,000 ft must: (1.00 P.)

[A] make it possible to eliminate the risk of fogging due to the sudden pressure changes

[B] allow for the rapid supply of oxygen in order to prevent hypoxia

[C] make it possible to prevent hyperventilation owing to the inhalation of 100 % oxygen

[D] allow for a rapid descent independent from sufficient supply of oxygen in order to prevent disorders due to hypoxia

4 What is the "Time of Useful Consciousness" for a rapid decompression at 25,000 ft ? (1.00 P.)

[A] Between 3 and 5 minutes depending on the physical activities of the subjected pilot

[B] Between 25 seconds and 1 minute 30 seconds

[C] About 18 seconds

[D] About 30 seconds

5 The Time of Useful Consciousness may vary according to:
1: physical activity of the subjected crew
2: the experience of the pilot on the type of aircraft in question
3: the strength and time of decompression
4: the cabin temperature (1.00 P.)

[A] 1,2

[B] 4

[C] 1,3

[D] 3,4

6 Safety is often improved by applying the principles of CRM, e.g.: (1.00 P.)

[A] unquestioned obedience to all the Captain's decisions

[B] abstention from any suggestion which might be untimely

[C] the avoidance of any conflict in order to preserve the crew's synergy

[D] expression of doubts or of a different opinion

7 An efficient flight deck (synergetic cockpit) will be observed when: (1.00 P.)

[A] the plan of action is defined by the Captain because of his experience level

[B] the Captain delegates the decision making process to other crew members

[C] decisions do not need to be discussed because of a common synergy between the crew members

[D] decisions are taken by the Captain with the help and participation of the other crew members

8 A non synergistic cockpit: (1.00 P.)

[A] is not very dangerous as each person checks everything personally

[B] is characterised by withdrawn crewmembers and unclear communication

[C] is characterised by a highly efficient crew, communicating appropriately with the outside

[D] always results from an over-relaxed atmosphere

9 CRM (Crew Resource Management) training is: (1.00 P.)

[A] not intended to change the individual's attitude at all

[B] intended solely to alter an individual's personality;

[C] intended to develop effectiveness of crew performance by improving attitudes towards flight safety and human relationship management

[D] is mainly of relevance to pilots with personality disorders or inappropriate attitudes

10 The confirmation bias of decision making is (1.00 P.)

[A] a tendency not to look for information which would reassure oneself about a decision

[B] a tendency to ignore that information which indicates that a hypothesis or decision is poor;

[C] a tendency to agree with the decision made by the group

[D] a tendency not to seek for information which confirms a judgement

11 What is the main problem caused by positive (+Gz) accelerations? (1.00 P.)

[A] An increase in blood pressure in the upper part of the body (above heart-level)

[B] A pooling of blood in the lower portions of the body, and hence less blood available

[C] Hyperoxygenation of the blood which may lead to sensory disorders

[D] An improvement of peripheral vision

12 Which of the following statements are correct ?
1 Hypothermia affects physical and mental abilities.
2 Man has effective natural protection against intense cold.
3 Shivering makes it possible to combat the cold to a certain extent, but uses up a lot of energy
4 Disorders associated with hypothermia appear at a body temperature of less than 35°C (1.00 P.)

[A] 1,3,4

[B] 2,4

[C] 2,3,4

[D] 1,2,3

13 Rods (scotopic visual cells) allow for: (1.00 P.)

[A] precise vision of contours and colours

[B] good night-vision after adaptation to darkness (30 min)

[C] red vision, both during the day and at night

[D] good, virtually instantaneous night-vision (scotopic vision)

14 Of the following alternatives, which effects are due to positive acceleration (+ Gz)?
- 1: Decrease in heart rate
- 2: Pooling of blood into lower parts of the body
- 3: Drop in blood pressure above heart-level
- 4: Downward displacement or deformation of soft or mobile organs (1.00 P.)

[A] 2,3,4

[B] 1,2,3

[C] 1

[D] 1,3,4

15 What is hypoxia ? (1.00 P.)

[A] Any condition where the oxygen concentration of the body is below normal limits or where the oxygen available to the body cannot be used due to some pathological condition

[B] A state characterised by an excessive supply of oxygen which may be due to maladjustment of the mask

[C] The total absence of oxygen in the blood of the body

[D] The respiratory symptom associated with altitude decompression sickness

16 To optimise one's night-vision performance, it is necessary:
- 1: to spend some time getting adapted to low levels of illumination
- 2: to increase the instrument panel lighting by reducing the cockpit lighting
- 3: not to focus on the point to be observed
- 4: to avoid blinding sources of light (1.00 P.)

[A] 2

[B] 1,3,4

[C] 1,2,4

[D] 2,3,4

17 Visual perception of depth at close to medium distance is primarily due to (1.00 P.)

[A] binocular vision

[B] peripheral vision

[C] the high sensitivity of the retina

[D] interactions between cones and rods

18 What could be symptoms of hypoxia (when flying without oxygen) above 12,000 ft? (1.00 P.)

[A] Headache, thirst, somnolence, collapse

[B] Euphoria, headache, improvement in judgement, loss of consciousness

[C] Headache, fatigue, dizziness, lack of coordination

[D] Trembling, increase in body temperature, convulsions, slowing of the rate of breathing

19 Which of the following characteristics apply to short-term memory ?
- 1: It is limited in time and size
- 2: It is unlimited in time and limited in size
- 3: It is stable and insensitive to disturbances
- 4: It is limited in time and unlimited in size (1.00 P.)

[A] 2,3

[B] 1,3

[C] 3,4

[D] 1

20 With regard to short-term memory, we can say that: (1.00 P.)

[A] it is made up of everyday information for immediate use, and is limited in its capacity for storing and retaining data

[B] it stores mainly procedural knowledge (skills)

[C] it is a stable form of working memory, and thus not very sensitive to any disturbance

[D] it is made up of everyday information for immediate use, and is limited in terms of the time for which it retains data but not in its storage capacity

21 Autokinetic illusion is: (1.00 P.)

[A] the sensation during a radial acceleration of seeing a fixed reference point moving into the opposite direction of the acceleration

[B] poor interpretation of the surrounding world

[C] a conflict between the visual system and bodily sensations

[D] an illusion in which a stationary point of light, if stared at for several seconds in the dark, may - without a frame of reference - appear to move

22 Which of the following statements are correct ?
-1: Modern aircraft allow for 50 - 60% relative humidity in the cabin air under any conditions of flight, which is satisfactory for the body
-2: Thirst is a symptom of dehydration
-3: Dehydration may lead to clinical manifestations such as dizziness and fatigue
-4: Drinking excessive quantities of water must be avoided since resistance to periods of low hydration will otherwise be lost (1.00 P.)

[A] 1,2,4

[B] 2,3,4

[C] 1,4

[D] 2,3

23 With regard to central vision, which of the following statements are correct ?
-1: It is due to the functioning of rods
-2: It enables details, colours and movement to be seen
-3: Its very active both during the day and at night
-4: It represents a zone where about 150.000 cones per mm are located to give high resolution capacity (1.00 P.)

[A] 2,4

[B] 2,3,4

[C] 1,3

[D] 1,2,4

24 Which of the following statements is correct ? (1.00 P.)

[A] The kinesthetic channel provides the most important information for flying

[B] 70% of information processed by man enters via the visual channel

[C] 40% of information processed by man enters via the visual channel

[D] Hearing is the sense which collects most information in man

25 What is the procedure above 10.000 ft altitude when faced with explosive decompression? (1.00 P.)

[A] First inform ATC

[B] Descend to below 10,000 ft and signal an emergency

[C] Don an oxygen mask and descend to below 10,000 ft

[D] Check the cabin altitude, don an oxygen mask and maintain level flight

26 What is the approximate Time of Useful Consciousness for a seated pilot following a rapid decompression at 35,000 ft ? (1.00 P.)

[A] 5 minutes

[B] 3 seconds

[C] 45 seconds

[D] 12 seconds

27 What is the Time of Useful Consciousness ? (1.00 P.)

[A] The time taken to become aware of hypoxia due to gradual decompression

[B] The pilot's reaction time when faced with hypoxia

[C] The period of time between the start of hypoxia and the moment that the pilot becomes aware of it

[D] The length of time during which an individual can act with both mental and physical efficiency, measured from the moment at which he/she loses his/her available oxygen supply

28 Which is the procedure to be followed when symptoms of decompression sickness occur? (1.00 P.)

[A] Only medical treatment is of use

[B] Descend to the lowest possible level and land as soon as possible

[C] Only the prompt supply of oxygen is necessary

[D] Descend to the lowest possible level and wait for the symptoms to disappear before climbing again

29 What is decompression sickness? (1.00 P.)

[A] A frequent disorder in commercial aviation due to the pressurisation curve of modern aircraft

[B] The formation of air bubbles in bodily tissues, with no consequences for people's capabilities

[C] A condition resulting from the formation of nitrogen bubbles in bodily tissues and fluids after a cabin pressure loss at high altitude

[D] A disorder which is solely encountered below 18,000 ft

30 Which of the following statements are correct:
-1: Scuba diving may be practiced without restriction
-2: Many medicines have effects which are incompatible with flight safety
-3: An adequate amount of fluid should be drunk when flying
-4: Alcohol has no effect on the inner ear. (1.00 P.)

[A] 2, 3 and 4 are correct

[B] 1, 2 and 3 are correct

[C] 2 and 3 are correct

[D] 1, 3 and 4 are correct

31 Which of the following statements about long-term memory are correct?
-1: Information is stored in the Semantic, Episodic and Procedural memories.
-2: The period of time for which information is retained is limited by the frequency with which this same information is used.
-3: It processes information quickly and has an effective mode of access in real time.
-4: Ease and speed of access is dependent upon, to a large extent, the frequency with which the information is recalled. (1.00 P.)

[A] 2 and 4 are correct

[B] 1 and 4 are correct

[C] 2, 3 and 4 are correct

[D] 1 and 2 are correct

32 The ability of the human eye to read alphanumeric information: (1.00 P.)

[A] is limited to daytime using the rod cells

[B] is almost equally shared by the entire retina

[C] is limited to the foveal area of the retina

[D] is governed by peripheral vision over an area of approximately 20 degrees of angle

33 Which of the following statements about hyperthermia is correct ? (1.00 P.)

[A] Vasodilatation is the only mechanism which is capable of reducing body temperature.

[B] Performance is not impaired by an increase in body temperature to 40°C or more.

[C] Complete adaptation to the heat in a hot country takes about a fortnight.

[D] Evaporation is more effective when ambient humidity is high.

34 The atmospheric pressure at 18,000 feet altitude is half the atmospheric pressure at sea level.
In accordance with this statement, (1.00 P.)

[A] the partial oxygen pressure at that altitude will also drop to 1/2 of the pressure of oxygen at sea level

[B] the oxygen percentage of the air at that altitude will drop by one half also

[C] the partial oxygen pressure at that altitude will be doubled

[D] the oxygen saturation of the blood at that altitude will drop by 50 % too

35 You climb from 0 to 50.000 ft and measure the decrease of the pressure per 5.000 ft. The absolute difference in barometric pressure is greatest between: (1.00 P.)

[A] 45.000 and 50.000 feet

[B] 5.000 and 10.000 feet

[C] 0 and 5.000 feet

[D] 10.000 and 15.000 feet

36 Physiological problems due to increasing altitude are caused by: (1.00 P.)

[A] increased atmospheric pressure

[B] disorientation

[C] accelerations

[D] decreased atmospheric pressure

37 The volume percentage of oxygen in the atmosphere at 30.000 feet remains at 21 %; but the partial pressure of oxygen: (1.00 P.)

[A] increases by expansion

[B] decreases significantly with lower temperatures

[C] remains constant, independent from altitude

[D] decreases with decreasing barometric pressure

38 Air at an altitude of 18.000 feet contains, approximately: (1.00 P.)

[A] 15% oxygen

[B] 10% oxygen

[C] 5% oxygen

[D] 21% oxygen

39 Dry air is a mixture of gases. Their volume percentage is about: (1.00 P.)

[A] 19% oxygen, 80% nitrogen, 1% other gases

[B] 21% oxygen,78% nitrogen, 1% other gases

[C] 25% oxygen, 74% nitrogen, 1% other gases

[D] 18% oxygen, 80% nitrogen, 2% other gases

40 Boyle's law is directly applicable in case of: (1.00 P.)

[A] the expansion of trapped gasses in the human body with increasing altitude

[B] hyperventilation with increasing altitude

[C] the occurrence of hypoxia with increasing altitude

[D] the occurrence of decompression sickness at high altitude

41 Dalton's law explains the occurrence of: (1.00 P.)

[A] altitude hypoxia

[B] creeps

[C] decompression sickness

[D] bends

42 Henry's Law explains the occurrence of: (1.00 P.)

[A] hyperventilation

[B] hypoxia

[C] decompression sickness

[D] diffusion

43 Our body takes its energy from:
1: minerals
2: protein
3: carbonhydrates
4: vitamins (1.00 P.)

[A] 1,4

[B] 1,3

[C] 2,3

[D] 1,2,3,4

44 What is meant by metabolism? (1.00 P.)

[A] The generation and utilisation of energy by the body's cells and tissues

[B] Transfer of chemical messages

[C] Information exchange

[D] Exchange of substances between the lung and the blood

45 One of the waste products of the metabolic process in the cell is: (1.00 P.)

[A] protein

[B] sugar

[C] carbon dioxide

[D] fat

46 The body loses water via:
1. the skin and the lungs
2. the kidneys

Which of the following lists all the correct answers ? (1.00 P.)

[A] 1 and 2 are correct

[B] both are false

[C] 1 is correct and 2 is not correct

[D] 1 is not correct and 2 is correct

47 Under normal circumstances, which gas will diffuse from the blood to the alveoli: (1.00 P.)

[A] nitrogen

[B] carbon dioxide

[C] carbon monoxide

[D] oxygen

48 The blood in the pulmonary artery is: (1.00 P.)

[A] lacking in both oxygen and carbon dioxide

[B] lacking in oxygen and rich in carbon dioxide

[C] rich in oxygen and lacking in carbon dioxide

[D] rich in both oxygen and carbon dioxide

49 The thin walls of capillaries are permeable for: (1.00 P.)

[A] platelets

[B] gases

[C] red blood cells

[D] protein

50 The circulatory system, amongst other things, allows for:
1. transportation of oxygen and carbon dioxide
2. transportation of information by chemical substances

Which of the following lists all the correct statements ? (1.00 P.)

[A] 1 and 2 are correct

[B] 1 is correct and 2 is false

[C] 1 is false and 2 is correct

[D] both are false

51 Oxygen, combined with haemoglobin in blood is transported by (1.00 P.)

[A] platelets

[B] white blood cells

[C] red blood cells

[D] blood plasma

52 Haemoglobin is: (1.00 P.)

[A] in the white blood cells

[B] in the platelets

[C] in the red blood cells

[D] dissolved in the plasma

53 Someone who has anaemia has: (1.00 P.)

[A] not enough plasma

[B] not enough functional haemoglobin

[C] not enough platelets

[D] not enough white blood cells

54 The average pulse of a healthy adult at rest is about: (1.00 P.)

[A] 110 to 150 beats/min

[B] 60 to 80 beats/min

[C] 90 to 100 beats/min

[D] 30 to 50 beats/min

55 With a heart rate of 72 beats per minute and a stroke volume of 70 ml the cardiac output is about: (1.00 P.)

[A] 7 litres/min

[B] 5 litres/min

[C] 8 litres/min

[D] 6 litres/min

56 At rest the cardiac output (the quantity of blood the heart pumps in one minute) of an adult is approximately: (1.00 P.)

[A] 5 litres/min

[B] 450 ml/min

[C] 75 litres/min

[D] 45 litres/min

57 The heart muscle is supplied with blood from: (1.00 P.)

[A] the auricles

[B] ventricles

[C] the pulmonary veins

[D] the coronary arteries

58 The normal arterial blood-pressure of a healthy adult is (systolic/diastolic): (1.00 P.)

[A] 80/20 mm Hg

[B] 220/180 mm Hg

[C] 180/120 mm Hg

[D] 120/80 mm Hg

59 Which of the following statements is correct?
The blood-pressure which is measured during flight medical checks is the pressure (1.00 P.)

[A] in the artery of the upper arm (representing the pressure at heart level)

[B] in the veins of the upper arm

[C] in the muscles of the upper arm

[D] in all the blood-vessels of the body (representing the pressure in the whole body)

60 Blood-pressure depends on:
1. the cardiac output
2. the resistance of the capillaries

Which of the following lists all the correct answers ? (1.00 P.)

[A] 1 and 2 are both false

[B] 1 and 2 are correct

[C] 1 is correct 2 is false

[D] 1 is false 2 is correct

61 The blood-pressure depends on:
1. the work of the heart
2. the peripheral resistance
3. the elasticity of the arterial walls
4. the blood volume and viscosity (1.00 P.)

[A] 2,3 and 4 are correct, 1 is false

[B] 1,3 and 4 are correct, 2 is false

[C] 1,2 and 3 are correct, 4 is false

[D] 1,2,3 and 4 are correct

62 Changes in blood-pressure are measured by: (1.00 P.)

[A] pacemakers

[B] adrenal glands

[C] pressoreceptors

[D] arteriols

63 The pressoreceptors are located in (1.00 P.)

[A] the intestines

[B] the lungs

[C] the heart

[D] the carotid and aortic arterial vessels

64 When the pressoreceptors signal a lowering of the blood-pressure there are adaptation mechanisms which result in:
1. an increase of respiratory activity
2. the arteriols to constrict
3. an increase of cardiac output
4. the heart rate to rise (1.00 P.)

[A] 2,3 and 4 are correct, 1 is false

[B] 1,3 and 4 are correct, 2 is false

[C] 1,2 and 3 are correct, 4 is false

[D] 1,2 and 4 are correct, 3 is false

65 The physiological effects of accelerations to the human body depend on:
1. the duration of the G-forces
2. the onset rate of the G-forces
3. the magnitude of the G-forces
4. the direction of the G-forces. (1.00 P.)

[A] 1and 4 are correct, 3 is false

[B] 2,3 and 4 are correct, 1 is false

[C] 1,2,3 are correct, 4 is false

[D] 1,2,3 and 4 are correct

66 Positive g will cause the blood-pressure in the brain to: (1.00 P.)

[A] decrease

[B] increase

[C] first increase, then decrease

[D] remain constant

67 During sustained positive G-forces the order of symptoms you can expect is: (1.00 P.)

[A] grey-out, unconsciousness, black-out and tunnel vision

[B] grey-out, tunnel vision, black-out and unconsciousness.

[C] unconsciousness, black-out, tunnel vision and grey out.

[D] black-out, grey-out, tunnel vision and unconsciousness.

68 The normal rate of breathing of an adult at rest is about: (1.00 P.)

[A] 4 cycles per minute

[B] 72 cycles per minute

[C] 32 cycles per minute

[D] 16 cycles per minute

69 The volume of air exchanged during a normal breathing cycle (tidal volume) is about: (1.00 P.)

[A] 500 ml of air

[B] 350 ml of air

[C] 150 ml of air

[D] 75 ml of air

70 The primary factor in controlling the rate and depth of breathing is the: (1.00 P.)

[A] partial pressure of oxygen in the blood

[B] total air pressure in the blood

[C] pressure of carbon dioxide in the blood

[D] partial pressure of nitrogen

71 The transfer of oxygen from the alveoli to the blood can be described by: (1.00 P.)

[A] Boyle's Law

[B] Henry's Law

[C] Dalton's Law

[D] the law of diffusion

72 The transfer of carbon dioxide from the blood to the alveoli can be described by: (1.00 P.)

[A] Boyles Law

[B] Dalton's Law

[C] the law of diffusion

[D] Henry's Law

73 The partial pressure of carbon dioxide in the alveoli is: (1.00 P.)

[A] higher than the pressure of carbon dioxide in the blood

[B] lower than the pressure of carbon dioxide in the atmospheric air.

[C] lower than in the blood

[D] the same as in the atmospheric air

74 The rate and depth of breathing is primarily regulated by the concentration of: (1.00 P.)

[A] oxygen in the cells

[B] nitrogen in the air

[C] water vapour in the alveoli

[D] carbon dioxide in the blood

75 A pressurized cabin helps to prevent:
1. decompression sickness
2 .the problem of expansion of gases in the intestines
3. hypoxia
4. coronary disease (1.00 P.)

[A] 2, 3 and 4 are correct.

[B] 1, 3 and 4 are correct.

[C] 1, 2 and 3 are correct.

[D] 1, 2 and 4 are correct.

76 Healthy people are usually capable of compensating for a lack of oxygen up to: (1.00 P.)

[A] 10.000 - 12.000feet

[B] 15.000 feet

[C] 25.000 feet

[D] 20.000 feet

77 When flying above 10.000 feet hypoxia arises because: (1.00 P.)

[A] the composition of the air is different from sea level

[B] the partial oxygen pressure is lower than at sea level.

[C] the percentage of oxygen is lower than at sea level

[D] the composition of the blood changes

78 Saturation of oxygen in the blood at sea level is approximately 98%. This saturation decreases with:
1. decreasing air pressure
2. carbon monoxide poisoning
3. increasing altitude
4. increasing air pressure (1.00 P.)

[A] 2, 3 and 4 are correct, 1 is false

[B] 1, 2 and 3 are correct, 4 is false

[C] 1, 3 and 4 are correct, 2 is false

[D] 1, 2 and 4 are correct, 3 is false

79 Hypoxia is a situation in which the cells (1.00 P.)

[A] are saturated with oxygen

[B] have a shortage of carbon dioxide

[C] have a shortage of oxygen

[D] are saturated with nitrogen

80 The severity of hypoxia depends on the:
1. rate of decompression
2. physical fitness
3. flight level
4. individual tolerance (1.00 P.)

[A] 1 and 3 are correct, 2 and 4 are false

[B] 2,3 and 4 are correct, 1 is false

[C] 1,2 and 3 are correct, 4 is false

[D] 1,2,3 and 4 are correct

81 Which of the following statements concerning hypoxia is correct? (1.00 P.)

[A] It is a potential threat to safety.

[B] It activates the senses and makes them function better.

[C] It is never a problem at altitudes below 25.000 ft.

[D] It has little effect on the body, because the body can always compensate for it.

82 Early symptoms of hypoxia could be:
1. euphoria
2. decreased rate and depth of breathing
3. lack of concentration
4. visual disturbances (1.00 P.)

[A] 1,2,3 and 4 are correct

[B] 1,2 and 3 are correct

[C] 1,2 and 4 are correct

[D] 1,3 and 4 are correct

83 One of the most dangerous symptoms of hypoxia concerning flight safety is: (1.00 P.)

[A] reduced coordination of limb movements, causing the pilot to spin

[B] cyanosis, reducing then pilots ability to hear

[C] impaired judgement

[D] hyperventilation, causing emotional stress

84 Which of the following symptoms can indicate hypoxia?
1. Blue lips and finger nails.
2. Euphoria.
3. Flatulence.
4 .Unconsciousness.. (1.00 P.)

[A] 2, 3 and 4 are correct.

[B] 1, 2 and 4 are correct.

[C] 1, 2 and 3 are correct.

[D] 1, 3 and 4 are correct.

85 Among the functions below, which is the most sensitive to hypoxia? (1.00 P.)

[A] Speech.

[B] Night vision.

[C] Motor coordination.

[D] Hearing.

86 You are crossing the Alps in a non-pressurised aircraft at an altitude of 15.000 feet. You do not use the oxygen mask because you feel fine. This is unsafe, because: (1.00 P.)

[A] the blood-pressure can get too low

[B] your judgement could be impaired

[C] you will get the bends

[D] the blood-pressure can get too high

87 During a night flight at 10,000 feet you notice that your visual acuity has decreased. In this case you can increase your acuity by: (1.00 P.)

[A] scanning sectors of the field of vision

[B] dim the instrument lights

[C] breathing extra oxygen through the oxygen mask.

[D] closing one eye

88 During flight all crewmembers have one or more of the following symptoms:
1. blue lips
2. mental disturbances
3. tingling sensations in arms and/or legs
4. reduction of peripheral vision
Which is the possible cause? (1.00 P.)

[A] Glaucoma.

[B] Hypoxia.

[C] Hypoglycaemia.

[D] Hypothermia.

89 Which measure(s) will help to compensate for hypoxia?
1. Descend below 10 000 FT.
2. Breathe 100 % oxygen.
3. Climb to or above 10 000 FT.
4. Reduce physical activities. (1.00 P.)

[A] 1 and 2 are correct, 3 and 4 are false

[B] only 1 is correct

[C] 1, 2 and 3 are correct

[D] 1, 2 and 4 are correct

90 A pilot can prevent hypoxia by: (1.00 P.)

[A] relying on the body's built in warning system recognizing any stage of hypoxia

[B] swallowing, yawing and applying the Valsalva method

[C] using additional oxygen when flying above 10000 ft

[D] not exceeding a cabin pressure altitude of 20000 ft

91 A pilot should not fly immediately after donating blood because: (1.00 P.)

[A] your heart rate is too low after blood-donation

[B] you have an increased susceptibility to fainting

[C] your blood-pressure is too low after blood-donation

[D] the chance you get the bends is higher after blood-donation

92 Hyperventilation is: (1.00 P.)

[A] a decreased lung ventilation

[B] a too high percentage of nitrogen in the blood

[C] a too high percentage of oxygen in the blood.

[D] an increased lung ventilation

93 Hyperventilation is: (1.00 P.)

[A] an increased heart rate caused by an increasing blood pressure

[B] an increased heart rate caused by a decreasing blood-pressure

[C] a normal compensatory physiological reaction to a drop in partial oxygen pressure (i.e. when climbing a high mountain)

[D] a reduction of partial oxygen pressure in the brain

94 If somebody starts breathing faster and deeper without physiological need (1.00 P.)

[A] the blood turns more alkaline

[B] the blood turns more acid

[C] the blood pressure in the brain will rise significantly

[D] the acid-base balance of the blood will not change

95 When hyperventilating you should: (1.00 P.)

[A] use the oxygen mask

[B] control your rate and depth of breathing

[C] apply the Valsalva method

[D] descend

96 A pilot can overcome hyperventilation by: (1.00 P.)

[A] depending on instruments

[B] increasing the rate and depth of breathing to eliminate harmful carbon dioxide

[C] controlling the rate and depth of breathing and/or breathing into a bag

[D] the use of drugs stabilizing blood pressure

97 You can overcome hyperventilation by breathing into a plastic or paper bag. The intention is: (1.00 P.)

[A] to raise the level of CO2 in the blood as fast as possible

[B] to prevent you from exhaling too much oxygen

[C] to increase the amount of nitrogen in the lungs

[D] to reduce blood pressure

98 Rising the perceptual threshold of a sensory organ means: (1.00 P.)

[A] a lesser sensitivity

[B] a greater selectivity

[C] a lesser selectivity

[D] a greater sensitivity

99 Subcutaneous pressure receptors are stimulated by: (1.00 P.)

[A] a touch on the skin indicating the true vertical

[B] environmental stressors

[C] the condition of the body itself

[D] the pressure created on the corresponding body parts when sitting, standing or lying down

100 The proprioceptors do not orient an individual to his/her surroundings, but informs him/her of (1.00 P.)

[A] a touch on the skin

[B] our surroundings

[C] the relative motion and relative position of his body parts

[D] the condition in the body itself

101 A stereotype and involuntary reaction of the organism on stimulation of receptors is called: (1.00 P.)

[A] data processing

[B] control system

[C] change of stimulation level

[D] reflex

102 The amount of light which strikes the retina is controlled by: (1.00 P.)

[A] the cornea

[B] the pupil

[C] the lens

[D] the ciliary body

103 When focussing on near objects: (1.00 P.)

[A] the shape of lens gets more spherical

[B] the shape of lens gets flatter

[C] the pupil gets larger

[D] the cornea gets smaller

104 The ability of the lens to change its shape is called: (1.00 P.)

[A] adaptation

[B] depth perception

[C] binocular vision

[D] accommodation

105 The mechanism of accommodation is caused by: (1.00 P.)

[A] the functioning of the muscles of the eye

[B] the functioning of the ciliary muscle around the lens

[C] the elasticity of the optic nerves

[D] the diameter of the pupil

106 Presbyopia is: (1.00 P.)

[A] myopia

[B] short sightedness

[C] long sightedness linked with age

[D] high intraocular pressure

107 Visual acuity during flight at high altitudes can be affected by:
1. anaemia
2. smoking in the cockpit
3. carbon monoxide poisoning
4. hypoxia (1.00 P.)

[A] 1,3 and 4 are correct

[B] 2,3 and 4 are correct

[C] 1, 2, 3 and 4 are correct

[D] 1,2 and 3 are correct

108 Glaucoma
1. can lead to total blindness
2. can lead to undetected reduction of the visual field
3. reduces visual acuity in its final stage (1.00 P.)

[A] 2 and 3 are correct, 1 is false

[B] 1 and 3 are correct, 2 is false

[C] 1 is correct, 2 and 3 are false

[D] 1, 2 and 3 are correct

109 Glaucoma is: (1.00 P.)

[A] disturbed adaptation

[B] disturbed night vision

[C] high intra-ocular pressure

[D] disturbed colour vision

110 The peripheral vision is important for: (1.00 P.)

[A] binocular vision

[B] detecting moving objects

[C] visual acuity

[D] colour vision

111 Although we have a field of vision of more than 180° it is important during flight to use the scanning technique, because (1.00 P.)

[A] the reduction in the field of vision with decreasing altitude is due to a lack of vitamin A

[B] only in the foveal area resolution is good enough to see an object clearly

[C] only in the peripheral area of the retina resolution is good enough to see an object clearly

[D] it is tiring to look continually in the same direction

112 The time an eye needs to adapt fully to the dark is about: (1.00 P.)

[A] 10 seconds

[B] 10 minutes

[C] 5 minutes

[D] 25 - 30 minutes

113 The photosensitive cells being responsible for night vision are called: (1.00 P.)

[A] the cones

[B] the fovea

[C] the cones and the rods

[D] the rods

114 When flying through a thunderstorm with lightning you can protect yourself from flashblindness by:
a) turning up the intensity of cockpit lights
b) looking inside the cockpit
c) wearing sunglasses
d) using blinds or curtains when installed (1.00 P.)

[A] a), b) and c) are correct, d) is false

[B] a), b), c) and d) are correct

[C] a) and b) are correct, c) and d) are false

[D] c) and d) are correct, a) and b) are false

115 Which scanning technique should be used when flying at night? (1.00 P.)

[A] Look with one eye.

[B] Look to the side (10 - 15 deg) of the object.

[C] Blink your eyes.

[D] Look directly at the object.

116 The Eustachian tube connects: (1.00 P.)

[A] the semi circular canals

[B] the middle ear and the inner ear

[C] the auditory duct and the inner ear

[D] the middle ear and the throat

117 Conductive hearing loss can be caused by:
1. damage to the ossicles in the middle ear caused by infection or trauma
2. a damage of the auditory nerve
3. an obstruction in the outer ear
4. a ruptured tympanic membrane (1.00 P.)

[A] 1, 3 and 4 are correct, 2 is false

[B] 1, 2 and 3 are correct, 4 is false

[C] 1, 2, 3 and 4 are correct

[D] 2, 3 and 4 are correct, 1 is false

118 Noise induced hearing loss (NIHL) is caused by: (1.00 P.)

[A] a blocked Eustachian tube

[B] pressure differences on both sides of the eardrum

[C] damage to the sensitive membrane in the cochlea due to overexposure to noise

[D] reduced mobility of the ossicles

119 Excessive exposure to noise damages: (1.00 P.)

[A] the sensitive membrane in the cochlea

[B] the semi circular canals

[C] the eardrum

[D] the ossicles

120 The inner ear is able to perceive:
1. angular acceleration
2. linear acceleration
3. Noise (1.00 P.)

[A] 1 and 2 are correct, 3 is false

[B] 2 and 3 are correct, 1 is false

[C] 2 is correct, 1 and 3 are both false

[D] 1 and 2 and 3 are correct

121 Angular accelerations are perceived by: (1.00 P.)

[A] the otholiths

[B] the cochlea

[C] the semi circular canals

[D] the receptors in the skin and the joints

122 The otoliths in the inner ear are sensitive to: (1.00 P.)

[A] angular acceleration

[B] linear acceleration and gravity

[C] angular speed

[D] constant speed only

123 Visual disturbances can be caused by:
1. hyperventilation
2. hypoxia
3. hypertension
4. fatigue (1.00 P.)

[A] 1, 2, 3 and 4 are correct

[B] 1, 2 and 3 are correct

[C] 1, 2 and 4 are correct

[D] 2, 3 and 4 are correct

124 Disorientation is more likely to occur when the pilot is:
1. flying in IMC
2. frequently changing between inside and outside references
3. flying from IMC into VMC
4. approaching over still water at night (1.00 P.)

[A] 1, 2 and 3 are correct

[B] 1, 2 and 4 are correct

[C] 1, 3 and 4 are correct

[D] 2, 3 and 4 are correct

125 Positive linear acceleration when flying in IMC may cause a false sensation of: (1.00 P.)

[A] apparent sideward movement of objects in the field of vision

[B] pitching down

[C] vertigo

[D] pitching up

126 Linear acceleration when flying straight and level in IMC may give the illusion of: (1.00 P.)

[A] climbing

[B] descending

[C] yawing

[D] spinning

127 Coriolis illusion, causing spatial disorientation is the result of: (1.00 P.)

[A] gazing in the direction of a flashing light

[B] undergoing positive G

[C] simultaneous head movements during aircraft manoeuvres

[D] normal deterioration of the semicircular canals with age

128 When turning in IMC , head movements should be avoided as much as possible. This is a prevention against: (1.00 P.)

[A] coriolis illusion

[B] oculogyral illusion

[C] autokinesis

[D] pressure vertigo

129 A pilot, trying to pick up a fallen object from the cockpit floor during a tight turn, experiences: (1.00 P.)

[A] pressure vertigo

[B] barotrauma

[C] autokinetic illusion

[D] coriolis illusion

130 Empty field myopia is caused by: (1.00 P.)

[A] lack of distant focal points

[B] flying over mountainous terrain

[C] atmospheric perspective

[D] ozone at altitude

131 When a pilot is starring at an isolated stationary light for several seconds in the dark he might get the illusion that: (1.00 P.)

[A] the colour of the light is varying

[B] the intensity of the light is varying

[C] the size of the light is varying

[D] the light is moving

132 When you stare at a single light against the dark (i.e.. an isolated star) you will find the light appears to move after some time. This phenomenon is called: (1.00 P.)

[A] coriolis illusion

[B] leans

[C] black hole illusion

[D] autokinetic phenomenon

133 How may haze effect perception? (1.00 P.)

[A] Objects will give better contrast.

[B] Objects seem to be closer than in reality.

[C] Objects seem to be further away than in reality.

[D] Haze makes the eyes to focus at infinity

134 The 'Black hole' phenomenon occurs during approaches at night and over water, jungle or desert. When the pilot is lacking visual cues other than those of the aerodrome there is an illusion of (1.00 P.)

[A] climbing

[B] being too low, flying a steeper approach than normal

[C] being too close, landing long

[D] being too high and too far away, dropping low and landing short

135 You fly VFR from your home base (runway width 27 m), to an international airport (runway width 45 m). On reaching your destination there is a risk of performing a: (1.00 P.)

[A] high approach with undershoot

[B] low approach with undershoot

[C] high approach with overshoot

[D] low approach with overshoot

136 You fly VFR from your home base (runway width 45 m) to a small airfield (runway width 27 m). On reaching your destination there is a risk of performing a: (1.00 P.)

[A] low approach with overshoot

[B] high approach with overshoot

[C] high approach with undershoot

[D] low approach with undershoot

137 1. In case of conflicting information you can always trust your Seat-of-the-Pants-Sense.
2. In case of conflicting information between the sensory organs and the instruments you must believe the instruments. (1.00 P.)

[A] 1 is correct, 2 is false

[B] 1 is false, 2 is correct

[C] 1 and 2 are correct

[D] 1 and 2 are false

138 Which procedure is recommended to prevent or overcome spatial disorientation? (1.00 P.)

[A] Rely on the Seat-of-the-Pants-Sense.

[B] Rely entirely on the indications of the flight instruments.

[C] Get adapted to low levels of illumination before flying and use off-center vision all the time.

[D] Tilt your head to the side to get better information from the semicircular canals.

139 How can a pilot prevent spatial disorientation in flight? (1.00 P.)

[A] Always try to catch outside visual cues.

[B] Establish and maintain a good instrument cross check.

[C] Rely on the "seat of the pants" sense.

[D] Rely on good situational awareness believing your natural senses.

140 If you are subjected to an illusion during night flying you should: (1.00 P.)

[A] scan the surroundings

[B] continue on instruments

[C] dim the cockpit lighting

[D] use your oxygen mask

141 If you are disorientated during night flying you must: (1.00 P.)

[A] rely on your instruments

[B] look outside

[C] check your rate of breathing - do not breathe too fast

[D] descend

142 A passenger complains about a painful inflated belly at 8.000 feet. You advise him to:
1. unbuckle and massage the belly
2. stand up and let go the gases out of the intestines
3. eat less gas forming food and avoid carbonhydrated beverages before flight in the future
4. drink a lot of water throughout the flight (1.00 P.)

[A] 2, 3 and 4 are correct

[B] 1 and 3 not advisable

[C] 1, 2 and 3 are correct

[D] only 4 is correct

143 On ascent the gases in the digestive tract will (1.00 P.)

[A] be absorbed by tissues and blood

[B] shrink

[C] expand

[D] stay the same

144 Having a serious cold it is better not to fly, due to the extra risk of:
1. flatulence
2. pain in the ear during descent
3. vertigo
4. pain in the nasal sinuses (1.00 P.)

[A] 2,3 and 4 are correct

[B] 1 and 2 are correct

[C] 1,2 and 4 are correct

[D] 1,3 and 4 are correct

145 Having a serious cold, you are going to fly. What can you expect? (1.00 P.)

[A] chokes

[B] bends

[C] pain in the sinuses

[D] hypoxia

146 Pain in the middle ear during descent may be eased by: (1.00 P.)

[A] levelling off and possibly climbing

[B] increasing the rate of descent

[C] blocking the effected ear with the palm of your hand

[D] using an oxygen mask

147 Which symptom does not belong to the following list: (1.00 P.)

[A] creeps

[B] leans

[C] chokes

[D] bends

148 The symptoms caused by gas bubbles under the skin following a decompression are called: (1.00 P.)

[A] bends

[B] leans

[C] chokes

[D] creeps

149 Symptoms caused by gas bubbles in the lungs, following a decompression are called: (1.00 P.)

[A] leans

[B] bends

[C] creeps

[D] chokes

150 Some hours after a rapid decompression at FL 300 you experience pain in the joints. Which of following answers is correct? (1.00 P.)

[A] You should ask for medical advice (flight surgeon) since this is a symptom of decompression sickness.

[B] This symptom indicates decompression sickness and will disappear when you take some exercise.

[C] This phenomenon is treated by physiotherapy.

[D] This phenomenon is treated by breathing 100% nitrogen.

151 Tolerance to decompression sickness is decreased by:
1. SCUBA diving
2. Obesity
3. Age
4. Body height (1.00 P.)

[A] only 4 is correct

[B] 2 and 4 are correct

[C] 1, 2 and 3 are correct

[D] 1, 3 and 4 are correct

152 Decompression symptoms are caused by: (1.00 P.)

[A] dissolved gases from tissues and fluids of the body

[B] low carbon dioxide pressure of inhaled air

[C] low oxygen pressure of inhaled air

[D] release of locked gases from joints

153 In the event of rapid decompression the first action for the flight deck crew is: (1.00 P.)

[A] don oxygen masks and ensure oxygen flow

[B] transmit mayday call

[C] carry out check for structural damage

[D] descent to the higher of 10000 ft or MSA

154 The following actions are appropriate when faced with symptoms of decompression sickness:
1. climb to higher level
2. descent to the higher of 10000 ft or MSA and land as soon as possible
3. breathe 100 % oxygen
4. obtain medical advice about recompression after landing (1.00 P.)

[A] 1, 2 and 3 are correct

[B] 2, 3 and 4 are correct

[C] 1 and 4 are correct

[D] 1 and 3 are correct

155 Decompression sickness can normally be prevented by:
1. avoiding cabin altitudes above 18 000 FT
2. maintaining cabin pressure below 8 000FT when flying at high altitudes
3. performing physical exercises before and during the flight
4. breathing 100 % oxygen for 30 min prior and during the flight (1.00 P.)

[A] 2 and 3 are correct, 4 is false

[B] 1, 2 and 3 are correct

[C] only 3 is correct

[D] 1, 2 and 4 are correct

156 Following a rapid decompression at 30.000 feet, the time of useful consciousness would be about: (1.00 P.)

[A] 10 to 12 minutes

[B] 5 to 10 minutes

[C] between 45 seconds and 1 minute 30 seconds

[D] 3 to 5 minutes

157 After a rapid decompression at 35 000 feet, the time of useful consciousness is about: (1.00 P.)

[A] 10 minutes.

[B] 30 to 60 seconds

[C] 5 minutes.

[D] 15 seconds or less

158 After SCUBA diving (more than 30 feet of depth) you have to wait a period of time before flying again. This period is at least: (1.00 P.)

[A] 6 hours

[B] 24 hours

[C] 48 hours

[D] 12 hours

159 Flying immediately after SCUBA diving involves the risk of getting: (1.00 P.)

[A] decompression sickness without having a decompression

[B] hyperventilation

[C] stress

[D] hypoxia

160 Which statement is correct regarding alcohol in the human body? (1.00 P.)

[A] An increase of altitude decreases the adverse effect of alcohol.

[B] When drinking coffee, the human body metabolizes alcohol at a faster rate than normal.

[C] Judgement and decision making can be affected even by a small amount of alcohol.

[D] A small amount of alcohol increases visual acuity.

161 Which statement is correct?
1. Smokers have a greater chance of suffering from coronary heart disease
2. Smoking tobacco will raise the individuals physiological altitude during flight
3. Smokers have a greater chance of contracting lung cancer (1.00 P.)

[A] 1,2 and 3 are correct

[B] 2 and 3 are correct, 1 is false

[C] 1 and 3 are correct, 2 is false

[D] 1 and 2 are correct, 3 is false

162 Smoking cigarettes reduces the capability of the blood to carry oxygen. This is because: (1.00 P.)

[A] carbon monoxide in the smoke of cigarettes assists diffusion of oxygen in the alveoli

[B] carbon monoxide increases the partial pressure of oxygen in the alveoli

[C] haemoglobin has a greater affinity for carbon monoxide than it has for oxygen

[D] the smoke of one cigarette can cause an obstruction in the respiratory tract

163 CO (carbon monoxide) present in the smoke of cigarettes can lead to:
1. reduction of time of useful consciousness
2. hypoxia at a lower altitude than normal (1.00 P.)

[A] 1 is correct, 2 is false

[B] 1 and 2 are both false

[C] 1 is false, 2 is correct

[D] 1 and 2 are both correct

164 Carbon monoxide in the human body can lead to:
1. loss of muscular power
2. headache
3. impaired judgement
4. pain in the joints
5. loss of consciousness (1.00 P.)

[A] 1, 2 , 3 and 5 are correct

[B] 2 and 3 are correct, 1 is false

[C] 1, 2, 3, 4 are correct

[D] 1, 2 and 4 are correct

165 Adverse effects of carbon monoxide increase as: (1.00 P.)

[A] altitude increases

[B] air pressure increases

[C] altitude decreases

[D] relative humidity decreases

166 The human circadian rhythm is based on a cycle of about: (1.00 P.)

[A] 25 hours

[B] 12 hours

[C] 48 hours

[D] 1.5 hours

167 Disturbance of the biological clock appears after a:
1. bad night's sleep
2. day flight Amsterdam - New York
3. day flight Amsterdam - Johannesburg
4. night flight New York - Amsterdam (1.00 P.)

[A] 1,2 and 3 are correct

[B] 1,2,3 and 4 are correct

[C] 1 and 3 are correct

[D] 2 and 4 are correct

168 The effects of sleep deprivation on performance:
1. increase with altitude
2. decrease with altitude
3. increase with higher workload
4. decrease with higher workload

Which of the following lists all the correct statements ? (1.00 P.)

[A] 1, 3 and 4 are correct

[B] 2, 3 and 4 are correct

[C] 1 and 3 are correct

[D] 1,2 and 3 are correct

169 Sleeplessness or the disruption of sleeping patterns
1. can lead to symptoms of drowsiness, irritability and lack of concentration
2. will make an individual more prone to make errors (1.00 P.)

[A] 1 is not correct, 2 is correct

[B] 1 and 2 are both not correct

[C] 1 is correct, 2 is not correct

[D] 1 and 2 are both correct

170 Which of the following statements is/are correct?
1. A person experiencing sleep loss is unlikely to be aware of personal performance degradation
2. Performance loss may be present up to 20 minutes after awaking from a short sleep (nap) (1.00 P.)

[A] 1 is false, 2 is correct

[B] 1 and 2 are both false

[C] 1 and 2 are both correct

[D] 1 is correct, 2 is false

171 The sleep cycles repeat during the course of a night's sleep.
1. Each succeeding cycle contains a greater amount of REM-sleep.
2. Frequent interruption of the REM-sleep may be harmful. (1.00 P.)

[A] 1 is correct, 2 is false

[B] 1 isfalse, 2 is correct

[C] 1 and 2 are both correct

[D] 1 and 2 are both false

172 Which of the following statements is/are correct?
1. REM-sleep becomes shorter with any repeated sleep cycle during the night.
2. REM-sleep is more important for the regeneration of mental functions than all the other sleep stages are. (1.00 P.)

[A] 1 is false, 2 is correct

[B] 1 is correct, 2 is false

[C] 1 and 2 are false

[D] 1 and 2 are both correct

173 A stress reaction is: (1.00 P.)

[A] the non-specific response of the body to demands placed on a person

[B] the non-specific stimuli causing a human body to respond

[C] the specific stimuli causing a human body to respond

[D] the specific response of the body to demands placed on a person

174 A person being exposed to extreme or prolonged stress factors can perceive: (1.00 P.)

[A] distress

[B] stressors

[C] coping stress

[D] eustress

175 Stress will effect:
1. attention
2. concentration
3. memory
4. judgment (1.00 P.)

[A] 1 and 3 are correct

[B] 2, 3 and 4 are correct

[C] 1 and 2 are correct

[D] 1, 2, 3 and 4 are correct

176 The biological reaction to stress is identical regardless of the cause of stress. This mechanism occurs in three phases and is referred to, by Selye, as the "General Adaptation Syndrome".
The sequence is: (1.00 P.)

[A] exhaustion phase - resistance phase - adaptation phase

[B] alarm phase - denial phase - exhaustion phase

[C] resistance phase - exhaustion phase - recovery phase

[D] alarm phase - resistance phase - exhaustion phase

177 According to the different phases of the "General Adaptation Syndrome" which of the following statement/s is/are correct?
1. During the alarm phase stress hormones (i.e. adrenalin) will cause a massive release of glucose into the blood, an acceleration of pulse and blood pressure as well as an increase in the rate and depth of breathing
2. During the resistance phase the parasympathetic system uses a different type of hormone (cortisol) assisting for the conversion of fat into sugar.
3. During the exhaustion phase the body has to be given time to eliminate the waste products which have been generated excessively during the two preceding phases. (1.00 P.)

[A] only 1 is correct

[B] 1 and 2 are correct, 3 is false

[C] 1,2 and 3 are correct

[D] 2 and 3 are correct, 1 is false

178 If coping with a stress situation is impossible, one will remain in the state of: (1.00 P.)

[A] adaptation

[B] distress

[C] hypoxia

[D] eustress

179 Which of the following statements concerning stress are true ?

1. Adaptation is a new state of equilibrium after having coped with a stressful situation.
2. An individual's anticipation of the situation and his/her perceived abilities to cope with it will determine the type and strength of stress. (1.00 P.)

[A] 1 is false, 2 is true

[B] 1 is true, 2 is false

[C] 1 and 2 are both true

[D] 1 and 2 are both false

180 The level at which a pilot will experience a situation as stressful (1.00 P.)

[A] depends on the individual's perception of available abilities in comparison to the perceived demands

[B] depends on self-confidence alone

[C] depends on the level of demand but not on individual interpretation of the situational demands

[D] does not depend on his capacity to absorb information

181 An identical situation can be experienced by one pilot as exciting in a positive sense and by another pilot as threatening. In both cases: (1.00 P.)

[A] both pilots will loose their motor-coordination

[B] both pilots will experience the same amount of stress

[C] the arousal level of both pilots will be raised

[D] the pilot feeling threatened, will be much more relaxed, than the pilot looking forward to what may happen

182 Which of the following statements is correct?
1. Psychosomatic means that mental and/or emotional stressors can be manifested in physical reactions.
2. Psychosomatic means that a physical problem is always followed by psychological stress. (1.00 P.)

[A] 1 is correct, 2 is false

[B] 1 is false, 2 is correct

[C] 1 and 2 are both correct

[D] 1 and 2 are both false

183 Whilst flying a coordinated turn, most of your activity is (1.00 P.)

[A] coping behaviour

[B] rule based behaviour

[C] knowledge based behaviour

[D] skill based behaviour

184 The choice of the moment you select flaps depending on situation and conditions of the landing is: (1.00 P.)

[A] automated behaviour

[B] knowledge based behaviour

[C] skill and/or rule based behaviour

[D] pressure based behaviour

185 The ability to monitor information which could indicate the development of a critical situation (1.00 P.)

[A] is dangerous, because it distracts attention from flying the aircraft

[B] is necessary to maintain good situational awareness

[C] makes no sense because the human information processing system is limited anyway

[D] is responsible for the development of inadequate mental models of the real world

186 Which of the following statements are correct?
1. The first information received determines how subsequent information will be evaluated.
2. If one has made up one's mind, contradictory information may not get the attention it really needs.
3. With increasing stress, attention is limited thereby reducing the flow of information to the central decision maker. (1.00 P.)

[A] 1 and 2 are correct

[B] 2 and 3 are correct

[C] 1, 2 and 3 are correct

[D] 1and 3 are correct

187 In an abnormal situation the pilot has an apparently correct explanation for the problem. The chance that he/she now ignores or devalues other relevant information, not fitting into his/her mental picture is: (1.00 P.)

[A] not possible since correct training should have eliminated this problem

[B] not usual

[C] not applicable with old and experienced pilots

[D] very rare

188 Which of the following statements are correct?
1. Interesting information is easier to take into consideration for creating a mental picture than boring information.
2.The sequence in which information is presented is also important for the use the pilot makes of it. (1.00 P.)

[A] 1 is not correct, 2 is correct

[B] 1 is correct, 2 is not correct

[C] 1 and 2 are both not correct

[D] 1 and 2 are both correct

189 If someone hyperventilates due to stress his/her blood will become: (1.00 P.)

[A] more acid

[B] more alkaline

[C] less saturated with oxygen

[D] more saturated with carbon dioxide

190 1. Euphoria can be a symptom of hypoxia.
2. Someone in an euphoric condition is more prone to error. (1.00 P.)

[A] 1 is not correct, 2 is correct

[B] 1 and 2 are both correct

[C] 1 and 2 are both not correct

[D] 1 is correct, 2 is not correct

191 Carbon monoxide poisoning can be treated by: (1.00 P.)

[A] increasing the amount of nitrogen being physically dissolved in the blood

[B] breathing into a paper bag

[C] increasing the amount of oxygen being physically dissolved in the blood

[D] decreasing the amount of oxygen being combined with the hemoglobin in the blood

192 Ozone in the air of a pressurized cabin can be eliminated by: (1.00 P.)

[A] avoiding flights along the equator

[B] spraying detergents

[C] ozone-converters

[D] climbing to altitudes above 45,000 ft

193 The exchange of gases between the alveoli and the blood is due to: (1.00 P.)

[A] physical exercise

[B] changes in atmospheric pressure

[C] inspiration

[D] diffusion

194 The circulation of blood:

1. transports oxygen to the body cells
2. withdraws waste products from the cells
3. conveys nutrients to the cells

Which of the following lists all the correct answers? (1.00 P.)

[A] 2 and 3

[B] 1 and 2

[C] 1 and 3

[D] 1, 2 and 3

195 The total gas volume of the lung is the sum of:

1. tidal volume
2. inspiratory reserve volume
3. expiratory reserve volume
4. residual volume

Which of the following lists the correct combination? (1.00 P.)

[A] 1, 2, 3 and 4

[B] 2 and 3

[C] 1 and 2

[D] 1, 2 and 3

196 During hyperventilation: (1.00 P.)

[A] acidity level of the blood is reduced

[B] oxygen concentration of the blood is below normal

[C] nitrogen concentration of the blood is above normal

[D] alkalinity level of the blood is reduced

197 Hypoxic hypoxia may be caused by:

1. climbing to a high altitude without using additional oxygen
2. malfunction in the oxygen supply system
3. loss of cabin pressurization at high altitude

Which of the following lists all the correct answers? (1.00 P.)

[A] 2 and 3

[B] 1 and 3

[C] 1, 2 and 3

[D] 1 and 2

198 Which of the following gases is fundamentally responsible for decompression sickness? (1.00 P.)

[A] Nitrogen.

[B] Sodium.

[C] Oxygen.

[D] Carbon dioxide.

199 What is the name of the functional connection between neurones? (1.00 P.)

[A] By-pass.

[B] Synapse.

[C] Interconnnection.

[D] Occlusion.

200 Glaucoma is due to: (1.00 P.)

[A] Drop in pressure of the liquid around the eye

[B] Increase in pressure of the liquid within the eye

[C] Damage to the eyeball due to high altitude

[D] Excess light on the eyeball

Vom Teilnehmer auszufüllen	
Name:	Prüf.-Nr.:
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1.	A	B	C	D	**2.**	A	B	C	D	**3.**	A	B	C	D
4.	**A**	**B**	**C**	**D**	**5.**	**A**	**B**	**C**	**D**	**6.**	**A**	**B**	**C**	**D**
7.	**A**	**B**	**C**	**D**	**8.**	**A**	**B**	**C**	**D**	**9.**	**A**	**B**	**C**	**D**
10.	**A**	**B**	**C**	**D**	**11.**	**A**	**B**	**C**	**D**	**12.**	**A**	**B**	**C**	**D**
13.	**A**	**B**	**C**	**D**	**14.**	**A**	**B**	**C**	**D**	**15.**	**A**	**B**	**C**	**D**
16.	**A**	**B**	**C**	**D**	**17.**	**A**	**B**	**C**	**D**	**18.**	**A**	**B**	**C**	**D**
19.	**A**	**B**	**C**	**D**	**20.**	**A**	**B**	**C**	**D**	**21.**	**A**	**B**	**C**	**D**
22.	**A**	**B**	**C**	**D**	**23.**	**A**	**B**	**C**	**D**	**24.**	**A**	**B**	**C**	**D**
25.	**A**	**B**	**C**	**D**	**26.**	**A**	**B**	**C**	**D**	**27.**	**A**	**B**	**C**	**D**
28.	**A**	**B**	**C**	**D**	**29.**	**A**	**B**	**C**	**D**	**30.**	**A**	**B**	**C**	**D**
31.	**A**	**B**	**C**	**D**	**32.**	**A**	**B**	**C**	**D**	**33.**	**A**	**B**	**C**	**D**
34.	**A**	**B**	**C**	**D**	**35.**	**A**	**B**	**C**	**D**	**36.**	**A**	**B**	**C**	**D**
37.	**A**	**B**	**C**	**D**	**38.**	**A**	**B**	**C**	**D**	**39.**	**A**	**B**	**C**	**D**
40.	**A**	**B**	**C**	**D**	**41.**	**A**	**B**	**C**	**D**	**42.**	**A**	**B**	**C**	**D**
43.	**A**	**B**	**C**	**D**	**44.**	**A**	**B**	**C**	**D**	**45.**	**A**	**B**	**C**	**D**
46.	**A**	**B**	**C**	**D**	**47.**	**A**	**B**	**C**	**D**	**48.**	**A**	**B**	**C**	**D**
49.	**A**	**B**	**C**	**D**	**50.**	**A**	**B**	**C**	**D**	**51.**	**A**	**B**	**C**	**D**
52.	**A**	**B**	**C**	**D**	**53.**	**A**	**B**	**C**	**D**	**54.**	**A**	**B**	**C**	**D**
55.	**A**	**B**	**C**	**D**	**56.**	**A**	**B**	**C**	**D**	**57.**	**A**	**B**	**C**	**D**
58.	**A**	**B**	**C**	**D**	**59.**	**A**	**B**	**C**	**D**	**60.**	**A**	**B**	**C**	**D**
61.	**A**	**B**	**C**	**D**	**62.**	**A**	**B**	**C**	**D**	**63.**	**A**	**B**	**C**	**D**
64.	**A**	**B**	**C**	**D**	**65.**	**A**	**B**	**C**	**D**	**66.**	**A**	**B**	**C**	**D**

Vom Teilnehmer auszufüllen	
Name:	Prüf.-Nr.:
Prüfungsdatum:	Unterschrift

67.	**A**	**B**	**C**	**D**	**68.**	**A**	**B**	**C**	**D**	**69.**	**A**	**B**	**C**	**D**
70.	**A**	**B**	**C**	**D**	**71.**	**A**	**B**	**C**	**D**	**72.**	**A**	**B**	**C**	**D**
73.	**A**	**B**	**C**	**D**	**74.**	**A**	**B**	**C**	**D**	**75.**	**A**	**B**	**C**	**D**
76.	**A**	**B**	**C**	**D**	**77.**	**A**	**B**	**C**	**D**	**78.**	**A**	**B**	**C**	**D**
79.	**A**	**B**	**C**	**D**	**80.**	**A**	**B**	**C**	**D**	**81.**	**A**	**B**	**C**	**D**
82.	**A**	**B**	**C**	**D**	**83.**	**A**	**B**	**C**	**D**	**84.**	**A**	**B**	**C**	**D**
85.	**A**	**B**	**C**	**D**	**86.**	**A**	**B**	**C**	**D**	**87.**	**A**	**B**	**C**	**D**
88.	**A**	**B**	**C**	**D**	**89.**	**A**	**B**	**C**	**D**	**90.**	**A**	**B**	**C**	**D**
91.	**A**	**B**	**C**	**D**	**92.**	**A**	**B**	**C**	**D**	**93.**	**A**	**B**	**C**	**D**
94.	**A**	**B**	**C**	**D**	**95.**	**A**	**B**	**C**	**D**	**96.**	**A**	**B**	**C**	**D**
97.	**A**	**B**	**C**	**D**	**98.**	**A**	**B**	**C**	**D**	**99.**	**A**	**B**	**C**	**D**
100.	**A**	**B**	**C**	**D**	**101.**	**A**	**B**	**C**	**D**	**102.**	**A**	**B**	**C**	**D**
103.	**A**	**B**	**C**	**D**	**104.**	**A**	**B**	**C**	**D**	**105.**	**A**	**B**	**C**	**D**
106.	**A**	**B**	**C**	**D**	**107.**	**A**	**B**	**C**	**D**	**108.**	**A**	**B**	**C**	**D**
109.	**A**	**B**	**C**	**D**	**110.**	**A**	**B**	**C**	**D**	**111.**	**A**	**B**	**C**	**D**
112.	**A**	**B**	**C**	**D**	**113.**	**A**	**B**	**C**	**D**	**114.**	**A**	**B**	**C**	**D**
115.	**A**	**B**	**C**	**D**	**116.**	**A**	**B**	**C**	**D**	**117.**	**A**	**B**	**C**	**D**
118.	**A**	**B**	**C**	**D**	**119.**	**A**	**B**	**C**	**D**	**120.**	**A**	**B**	**C**	**D**
121.	**A**	**B**	**C**	**D**	**122.**	**A**	**B**	**C**	**D**	**123.**	**A**	**B**	**C**	**D**
124.	**A**	**B**	**C**	**D**	**125.**	**A**	**B**	**C**	**D**	**126.**	**A**	**B**	**C**	**D**
127.	**A**	**B**	**C**	**D**	**128.**	**A**	**B**	**C**	**D**	**129.**	**A**	**B**	**C**	**D**
130.	**A**	**B**	**C**	**D**	**131.**	**A**	**B**	**C**	**D**	**132.**	**A**	**B**	**C**	**D**

Vom Teilnehmer auszufüllen	
Name:	Prüf.-Nr.:
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133.	A	B	C	D	134.	A	B	C	D	135.	A	B	C	D
136.	A	B	C	D	137.	A	B	C	D	138.	A	B	C	D
139.	A	B	C	D	140.	A	B	C	D	141.	A	B	C	D
142.	A	B	C	D	143.	A	B	C	D	144.	A	B	C	D
145.	A	B	C	D	146.	A	B	C	D	147.	A	B	C	D
148.	A	B	C	D	149.	A	B	C	D	150.	A	B	C	D
151.	A	B	C	D	152.	A	B	C	D	153.	A	B	C	D
154.	A	B	C	D	155.	A	B	C	D	156.	A	B	C	D
157.	A	B	C	D	158.	A	B	C	D	159.	A	B	C	D
160.	A	B	C	D	161.	A	B	C	D	162.	A	B	C	D
163.	A	B	C	D	164.	A	B	C	D	165.	A	B	C	D
166.	A	B	C	D	167.	A	B	C	D	168.	A	B	C	D
169.	A	B	C	D	170.	A	B	C	D	171.	A	B	C	D
172.	A	B	C	D	173.	A	B	C	D	174.	A	B	C	D
175.	A	B	C	D	176.	A	B	C	D	177.	A	B	C	D
178.	A	B	C	D	179.	A	B	C	D	180.	A	B	C	D
181.	A	B	C	D	182.	A	B	C	D	183.	A	B	C	D
184.	A	B	C	D	185.	A	B	C	D	186.	A	B	C	D
187.	A	B	C	D	188.	A	B	C	D	189.	A	B	C	D
190.	A	B	C	D	191.	A	B	C	D	192.	A	B	C	D
193.	A	B	C	D	194.	A	B	C	D	195.	A	B	C	D
196.	A	B	C	D	197.	A	B	C	D	198.	A	B	C	D

Vom Teilnehmer auszufüllen	
Name:	Prüf.-Nr.:
Prüfungsdatum:	Unterschrift

199.	**A**	**B**	**C**	**D**		**200.**	**A**	**B**	**C**	**D**

Nur für den internen Gebrauch	
LÖSUNGSBOGEN	Prüf.-Nr.:
Prüfungsdatum:	

1.				D	**2.**	A				**3.**		B		
4.	**A**				**5.**			**C**		**6.**				**D**
7.				**D**	**8.**		**B**			**9.**			**C**	
10.		**B**			**11.**		**B**			**12.**	**A**			
13.		**B**			**14.**	**A**				**15.**	**A**			
16.		**B**			**17.**	**A**				**18.**			**C**	
19.				**D**	**20.**	**A**				**21.**				**D**
22.				**D**	**23.**	**A**				**24.**		**B**		
25.			**C**		**26.**			**C**		**27.**				**D**
28.		**B**			**29.**			**C**		**30.**			**C**	
31.		**B**			**32.**			**C**		**33.**			**C**	
34.	**A**				**35.**			**C**		**36.**				**D**
37.				**D**	**38.**				**D**	**39.**		**B**		
40.	**A**				**41.**	**A**				**42.**			**C**	
43.			**C**		**44.**	**A**				**45.**			**C**	
46.	**A**				**47.**		**B**			**48.**		**B**		
49.		**B**			**50.**	**A**				**51.**			**C**	
52.			**C**		**53.**		**B**			**54.**		**B**		
55.		**B**			**56.**	**A**				**57.**				**D**
58.				**D**	**59.**	**A**				**60.**		**B**		
61.				**D**	**62.**			**C**		**63.**				**D**
64.	**A**				**65.**				**D**	**66.**	**A**			

Nur für den internen Gebrauch	
LÖSUNGSBOGEN	Prüf.-Nr.:
Prüfungsdatum:	

67.		**B**			**68.**				**D**	**69.**	**A**			
70.			**C**		**71.**				**D**	**72.**			**C**	
73.			**C**		**74.**				**D**	**75.**			**C**	
76.	**A**				**77.**		**B**			**78.**		**B**		
79.			**C**		**80.**				**D**	**81.**	**A**			
82.				**D**	**83.**			**C**		**84.**		**B**		
85.		**B**			**86.**		**B**			**87.**			**C**	
88.		**B**			**89.**				**D**	**90.**			**C**	
91.		**B**			**92.**				**D**	**93.**			**C**	
94.	**A**				**95.**		**B**			**96.**			**C**	
97.	**A**				**98.**	**A**				**99.**				**D**
100.			**C**		**101.**				**D**	**102.**		**B**		
103.	**A**				**104.**				**D**	**105.**		**B**		
106.			**C**		**107.**			**C**		**108.**				**D**
109.			**C**		**110.**		**B**			**111.**		**B**		
112.				**D**	**113.**				**D**	**114.**		**B**		
115.		**B**			**116.**				**D**	**117.**	**A**			
118.			**C**		**119.**	**A**				**120.**				**D**
121.			**C**		**122.**		**B**			**123.**			**C**	
124.		**B**			**125.**				**D**	**126.**	**A**			
127.			**C**		**128.**	**A**				**129.**				**D**
130.	**A**				**131.**				**D**	**132.**				**D**

Nur für den internen Gebrauch	
LÖSUNGSBOGEN	Prüf.-Nr.:
Prüfungsdatum:	

133.			C		134.				D	135.			C	
136.				D	137.		B			138.		B		
139.		B			140.		B			141.	A			
142.			C		143.			C		144.	A			
145.			C		146.	A				147.		B		
148.				D	149.				D	150.	A			
151.			C		152.	A				153.	A			
154.		B			155.				D	156.			C	
157.		B			158.		B			159.	A			
160.			C		161.	A				162.			C	
163.				D	164.	A				165.	A			
166.	A				167.				D	168.			C	
169.				D	170.			C		171.			C	
172.	A				173.	A				174.	A			
175.				D	176.				D	177.			C	
178.		B			179.			C		180.	A			
181.			C		182.	A				183.				D
184.			C		185.		B			186.			C	
187.		B			188.				D	189.		B		
190.		B			191.			C		192.			C	
193.				D	194.				D	195.	A			
196.	A				197.			C		198.	A			

Nur für den internen Gebrauch	
LÖSUNGSBOGEN	Prüf.-Nr.:
Prüfungsdatum:	

199.		**B**			**200.**		**B**		