# HUMAN PERFORMANCE
# 040

**1 In the International Standard Atmosphere (ISA), as altitude increases in the troposphere, air density:**

[A] Also increases.
[B] Will not be affected as air density is independent of altitude.
[C] Stays the same.
[D] Decreases.

**2 The International Standard Atmosphere (ISA) sea-level pressure is equal to:**

[A] 1014.00 mb.
[B] 1014.25 Hpa.
[C] 1013.25 mb.
[D] 50 inches of mercury.

**3 Air in the atmosphere is made up of:**

[A] Nitrogen (78%), Oxygen (21%), Carbon Dioxide (0.03%) and Hydrogen (1%).
[B] Nitrogen (78 %), Oxygen (21%), Carbon Dioxide (0.03%) and Argon (1%).
[C] Nitrogen (21%), Oxygen (0.03%), Carbon Dioxide (78%) and Argon (1%).
[D] Nitrogen (1%), Oxygen (78%), Carbon Dioxide (21%) and Argon (0.03%).

**4 In the International Standard Atmosphere (ISA), as altitude increases in the Troposphere, temperature:**

[A] Stays the same.
[B] Also increases.
[C] Will not be affected as it is independent of altitude.
[D] Decreases.

**5 If the atmospheric pressure decreases, the partial pressure of the oxygen in the atmosphere will:**

[A] Decrease.
[B] Not be affected as it is independent of atmospheric pressure.
[C] Increase.
[D] Stay the same.

**6 In the international standard atmosphere (ISA), as altitude increases in the Troposphere, pressure:**

[A] Stays the same.
[B] Decreases.
[C] Also increases.
[D] Will not be affected as pressure is independent of altitude.

**7 At altitude, the volumetric proportion of oxygen in the atmosphere is:**

[A] Higher than at MSL.
[B] Dependent on the actual altitude.
[C] The same as at mean sea level (MSL).
[D] Lower than at MSL.

**8 Which gas, which is absorbed by the body during normal breathing, plays an important role in decompression sickness?**

[A] Carbon Monoxide.
[B] Carbon Dioxide.
[C] Oxygen.
[D] Nitrogen.

**9 After donating blood, what is the minimum time a pilot should wait before flying?**

[A] 2 hours.
[B] 24 hours.
[C] 48 hours.
[D] 12 hours.

**10 Blood pressure may be too high due to:**

[A] All answers are correct.
[B] Stress.
[C] Smoking.
[D] Age.

**11 Which body system is responsible for distributing oxygen around the body?**

[A] The Nervous System.
[B] The Oxidation System.
[C] The Respiratory System.
[D] The Circulatory System.

**12 The blood carries ____ around the body and removes ____ from the body with the exchange occurring in the ____.**

[A] Oxygen / Carbon Dioxide / Capillaries.
[B] Carbon Dioxide / Oxygen / Capillaries.
[C] Oxygen / Carbon Dioxide / Arteries.
[D] Carbon / Dioxide / Oxygen Veins.

**13 Which part of the nervous system usually controls breathing?**

[A] The Peripheral Nervous System.
[B] All answers are correct.
[C] The Central Nervous System.
[D] The Autonomic Nervous System.

**14 Brain cells that have been deprived of oxygen will start to die in:**

[A] 2 minutes.
[B] 30 minutes.
[C] 2 seconds.
[D] 2 hours.

**15 Which of the following gases regulate the rate and depth of breathing, depending on the levels at which the gas is present in the blood?**

[A] Oxygen.
[B] Carbon Dioxide.
[C] Nitrogen.
[D] Carbon Monoxide.

**16 When a person is experiencing stress or fear, adrenaline is released into the blood stream causing immediate:**

[A] Loss of consciousness.
[B] Increase in the pulse-rate.
[C] Decrease in the pulse-rate.
[D] Fatigue.

**17 Approximately how long does it take a person to dissipate one unit of alcohol from the blood?**

[A] 5 hours.
[B] 1/2 hour.
[C] 12 hours.
[D] 2 hours.

**18 Enter into the following statement the most correct pair of gases from the options below. Hemoglobin in red blood cells is more readily attracted to ____ than ____.**

[A] Oxygen / Nitrogen.
[B] Carbon Dioxide / Nitrogen.
[C] Nitrogen / Oxygen.
[D] Carbon Monoxide / Oxygen.

**19 Which organ controls all other bodily functions?**

[A] The brain.
[B] The lungs.
[C] The heart.
[D] The spinal cord.

**20 The condition whereby the body does not get enough oxygen to function correctly is known as:**

[A] Hyperventilation.
[B] Hypoxia.
[C] Hypotension.
[D] Hyperglycemia.

**21 A likely symptom, or likely symptoms, of Hypoxia might be:**

[A] Cyanosis.
[B] Increased heart rate.
[C] Formication.
[D] All answers are correct.

**22 Above what altitude do pilots need to breath supplementary oxygen?**

[A] 2,000 ft.
[B] 8,000 ft.
[C] 10,000 ft.
[D] 20,000 ft.

**23 Compared to a non-smoker, someone who smokes is likely to experience the effects of hypoxia at:**

[A] The same altitude.
[B] Any altitude.
[C] A higher altitude.
[D] A lower altitude.

**24 The effects of Hypoxia can be increased by:**

[A] Increased temperature.
[B] Increased altitude.
[C] Alcohol.
[D] All answers are correct.

**25 You are taking a friend flying and are cruising at 6,000 ft. Your passenger begins suffering from a tingling sensation, dizziness and visual disorders and then becomes unconscious. Your passenger is probably suffering from:**

[A] Hyperventilation.
[B] Angina.
[C] Hypoxia.
[D] Food poisoning.

**26 A likely symptom, or likely symptoms, of Hypoxia might be:**

[A] Unconsciousness.
[B] Impaired judgment.
[C] All answers are correct.
[D] Tingling fingers and toes.

**27 For the pilot of an aircraft on a head-on collision course with a fast-moving jet, the image of the approaching jet will appear to grow in size in the following manner:**

[A] At a constant rate.
[B] Very rapidly at first but then continue to grow at a constant rate.
[C] Only slowly at first until just before impact when the image would grow in size very rapidly.
[D] Rapidly initially, and then remain at a constant size until impact.

**28 Color-blindness or, more accurately, color-defective vision, is caused by:**

[A] Defective functioning of the ciliary muscles.
[B] A foreshortened eyeball.
[C] A defect in the structure of the color-sensitive cones in the retina.
[D] A defect in the lens tissue of the eye.

**29 Hypermetropia and Myopia are normally caused by:**

[A] A misshaped eye ball.
[B] Badly fitting spectacles.
[C] Eye strain.
[D] Stress.

**30 Hypermetropia is caused by a ____ eyeball and treated by a ____ whereas Myopia is caused by a ____ eyeball and treated with_____.**

[A] Lengthened / convex / shortened / concave.
[B] Lengthened / concave / shortened / convex.
[C] Shortened / concave / lengthened / convex.
[D] Shortened / convex / lengthened / concave.

**31 Which of the following organs of the body supplies the single most dependable source of sensory information?**

[A] The Neo-cortex.
[B] The Ear.
[C] The Nose.
[D] The Eye.

**32 What is the component of the eye responsible for peripheral vision and sensitive to low light levels?**

[A] The Cones.
[B] The Fovea.
[C] The Retina.
[D] The Rods.

**33 Empty Field Myopia is a condition where the eyes naturally focus at a distance of approximately:**

[A] 1 - 2 meters.
[B] 20 - 500 meters.
[C] Infinity.
[D] At the horizon.

**34 At night it is easier to focus on an object if you:**

[A] Look directly at it.
[B] Look slightly to one side of it.
[C] Look directly at it while holding your eyes open as wide as you can.
[D] Look about 50 degrees either side of it.

**35 To lessen the danger of collision with an aircraft which might be in a pilot's blind spot and closing on a constant relative bearing, the pilot should:**

[A] Change heading by a few degrees every 10 minutes or so.
[B] Roll the aircraft from right to left by a few degrees every 10 minutes or so.
[C] Carry out periodic clearing turns.
[D] Carry out a systematic look out at all times.

**36 Where is the blind spot?**

[A] On the Iris.
[B] On the Fovea.
[C] Where the optic nerve enters the Retina.
[D] On the edge of the Lens.

**37 Accommodation is the power of the lens to focus rays of light from near objects onto the Fovea. Accommodation is controlled by:**

[A] The Ciliary muscles.
[B] The Retina.
[C] The Iris.
[D] The Rods and Cones.

**38 Dark adaptation takes about ____ for the Rods, and ____ for the Cones.**

[A] 30 minutes / 7 minutes.
[B] 15 minutes / 20 minutes.
[C] 25 minutes / 45 minutes.
[D] 7 minutes / 30 minutes

**39 The power of accommodation in an eye:**

[A] Is not affected by the degree of elasticity of the lens.
[B] Is increased as the elasticity of the lens decreases.
[C] Is decreased as the elasticity of the lens decreases.
[D] Has nothing to do with the lens.

**40 When flying solo, a pilot who suspects he is suffering from spatial disorientation should:**

[A] Blink rapidly several times.
[B] Swallow hard, pinch the nostrils and blow down the nose to clear the Eustachian tube.
[C] Believe the indications of his instruments.
[D] Believe his somatosensory senses.

**41 What is noise induced hearing loss?**

[A] Loss of hearing due to damage to the ossicles.
[B] Loss of hearing due to damage to the vestibular apparatus.
[C] Loss of hearing due to damage to the middle ear.
[D] Loss of hearing due to damage to the cochlea.

**42 When can a pilot experience the "leans"?**

[A] In the climb.
[B] In the descent.
[C] In the climb or the descent.
[D] In all flight conditions.

**43 What is the most important sense for spatial orientation?**

[A] All senses play their part in situation awareness.
[B] Hearing and balance.
[C] Sight.
[D] "Seat of the pants".

**44 Which of the following should a pilot primarily rely on if he becomes disorientated in Visual Meteorological Conditions?**

[A] His sense of balance.
[B] The aircraft's instruments.
[C] His sense of sight.
[D] Turning the head to recover from disorientation.

**45 On what does the causes of noise induced hearing loss depend?**

[A] Both the intensity and duration of the noise above 90 dbs.
[B] Both the intensity and duration of the noise above 100 dbs.
[C] The duration of the noise above 110 dbs.
[D] The duration of the noise above 100 dbs.

**46 The frequency band that a healthy young person can hear is:**

[A] 20 - 20.000 cycles per second.
[B] 500 - 15.000 cycles per second.
[C] 80 - 20.000 cycles per second.
[D] 70 - 15.000 cycles per second.

**47 What is the purpose of the Eustachian tube?**

[A] To pass sound waves across the middle ear to the auditory nerve.
[B] To allow ambient pressure to equalise on both sides of the vestibular apparatus.
[C] To allow ambient pressure to equalise on both sides of the ear drum.
[D] To allow ambient pressure to equalise on the middle ear side of the ear drum.

**48 One of the main contributory factors to the onset of motion sickness is:**

[A] Performing high g maneuvers.
[B] The mismatch between visual and vestibular sensory inputs.
[C] Stalling.
[D] Rolling quickly into turns.

**49 During straight and level flight any pronounced linear acceleration may produce sensation of the nose pitching up. In such a situation, the pilot should:**

[A] Correct the pitching movement by moving the control column slightly forward.
[B] Rely on information from the vestibular apparatus to maintain orientation.
[C] Rely on his "seat of the pants" feeling to make any necessary correction.
[D] Ignore vestibular information and believe what the instruments are indicating.

**50 Loudness is measured in:**

[A] Decibels.
[B] Cycle per second.
[C] Hertz.
[D] Pascal´s.

**51 Which of the following should a pilot primarily rely on if he becomes disorientated in instrument meteorological conditions?**

[A] The aircraft's instruments.
[B] His sense of balance.
[C] Turning the head to recover from disorientation.
[D] His sense of sight.

**52 The vestibular apparatus detects ____ acceleration:**

[A] Angular.
[B] Angular and linear.
[C] Positive "g".
[D] Linear.

**53 If an aircraft accelerates, what do the otoliths indicate to the brain?**

[A] That the aircraft is turning.
[B] That the aircraft is pitching down.
[C] That the aircraft is pitching up.
[D] That the aircraft is climbing and turning.

**54 Complete the following sentence. If your Eustachian tube is blocked and you cannot clear your ears, you should:**

[A] Clear your nose with a nasal inhaler before flying.
[B] Fly only as a passenger.
[C] Ground yourself until the condition causing the blocking of the Eustachian tube has cleared up.
[D] Proceed with your flight but ensure that you swallow hard frequently.

**55 While flying, the changes in outside air pressure can cause air trapped in the body cavities to expand and contract. This is known as Otic Barotrauma and it most likely to effect:**

[A] The sinuses.
[B] All of the above.
[C] The teeth.
[D] The middle ear.

**56 The best preventative actions to take if someone is showing symptoms of Stroboscopic Effect is to:**

[A] Sit the person in a sunny area.
[B] Place the person in the shade and get them to close their eyes.
[C] Give him a task to distract him.
[D] Take no action, as the symptoms last for a short time only.

**57 If taking a course of drugs, is it advisable to pilot an aircraft?**

[A] No, unless cleared by an Aviation Medicine Specialist.
[B] Yes, provided that they are antibiotics, as these do not have side-effects.
[C] Yes, provided that the drug is non-prescription.
[D] No, you should never fly while taking any drugs.

**58 The ability of a pilot to withstand even moderate forces can be affected by:**

[A] The maximum load limits of the aircraft.
[B] Presbycusis.
[C] All of the above.
[D] Fatigue in the pilot.

**59 A pilot should not fly for at least how long after a local anesthetic?**

[A] 24 hours.
[B] 2 hours.
[C] 12 hours.
[D] 48 hours.

**60 You are suffering from a cold with slightly blocked nose and sinuses and you have an aircraft booked to fly. Should you:**

[A] Take a decongestant 1/2 an hour before flight?
[B] Not fly?
[C] Fly as normal?
[D] Fly, but be sure to select only low rates of climb and descent?

**61 A pilot should not fly for at least how long after a general anesthetic?**

[A] 24 hours.
[B] 48 hours.
[C] 12 hours.
[D] 2 hours.

**62 Which of the following may cause fainting?**

[A] All of the above.
[B] A too rapid eye scan.
[C] Over meticulous flight planning.
[D] A sudden shock.

**63 When compared to visual stimuli, auditory stimuli (noises) are:**

[A] Less likely to attract attention and more likely to be responded to in error.
[B] More likely to attract attention and more likely to be responded to in error.
[C] Less likely to attract attention and less likely to be responded to in error.
[D] More likely to attract at tention and less likely to be responded to in error.

**64 If a pilot is approaching a runway much larger than that at his home airfield, what is his visual perception of the runway likely to be?**

[A] The runway will appear further away than it actually is.
[B] The runway will appear closer than it actually is.
[C] A different approach path should be adopted.
[D] Distances will be easy to judge.

**65 A false perception characterised by a distortion of real sensory stimuli is known as:**

[A] Day-dreaming.
[B] Mirage.
[C] Boredom response.
[D] Hallucination.

**66 Repeating information several times transfer it to long-term memory is called:**

[A] Memory induction.
[B] Prompting.
[C] Chunking.
[D] Rehearsing.

**67 It is generally accepted that the short-term memory can hold how many items and how long?**

[A] 7 items for 10-20 seconds.
[B] 15 items for 1-5 minutes.
[C] 7 items for 5-10 minutes.
[D] 4 items for 15 seconds.

**68 If a pilot is used to flying in relatively polluted hazy air and then flies in a very clear sky:**

[A] Near objects may be mistaken for those further away.
[B] Distant objects may appear further away than they are.
[C] Distant objects may appear closer than they are.
[D] Near objects may appear further away than they are.

**69 From the options below, choose the correct sequence of the various stages of the reasoning process.**

[A] Detection, Perception, Decisions taken, Action, Feedback.
[B] Perception, Action, Feedback, Detection, Decisions taken.
[C] Detection, Feedback, Decisions taken, Action, Perception.
[D] Detection, Perception, Decisions taken, Feedback, Action.

**70 Which of the following will give the illusion that the aircraft is too low during an approach?**

[A] A brightly lit aerodrome in an otherwise dark area.
[B] An up-sloping runway.
[C] A narrower than normal runway.
[D] A down-sloping runway.

**71 As captain of an aircraft you will need to show good leadership skills. Which of the following is not one such skill?**

[A] Maintaining good situational awareness.
[B] Aggressive assertiveness.
[C] Forward planning.
[D] The art of delegation.

**72 You have planned to take a couple of friends on an air experience flight. On the day, the weather conditions are marginal and there is a strong cross-wind on the runway. As a competent assessor of risk, which of the following decisions should you take?**

[A] Ask your friends if they are prepared to fly in the prevailing conditions, before assessing the situation yourself.
[B] Proceed with the flight and treat it as an opportunity to practice flying in adverse conditions.
[C] Get airborne as planned, as it is always wise to stick to your flight plan if you possibly can.
[D] Reschedule the flight for another time, discounting the immediate disappointment to your friends.

**73 When making a decision, will a pilot be influenced by previous experience?**

[A] Yes, but only if the experience was bad.
[B] Yes, past experience can play a part in decision-making.
[C] Yes, but only if the experience is good.
[D] No, each decision is unrelated.

**74 Mental Overload usually:**

[A] Leads to better performance.
[B] Has no effect on performance.
[C] Causes changes in the speed and accuracy of performance which vary from individual to individual.
[D] Leads to degraded performance.

**75 Complete the following statement. If, as an inexperienced pilot, you are flying with someone of much greater experience, and you see him doing something you consider to be dangerous, you should:**

[A] Ignore the situation because he obviously knows what he is doing.
[B] Do nothing for the moment, but check the wisdom and correctness of his action by discussing it with an instructor after you have landed.
[C] Immediately question his course of action.
[D] Wait until the action or manoeuvre is completed, and then questions him.

**76 Good briefings are very important. Which of the following could be the result of a bad briefing?**

[A] Decreased uncertainty.
[B] Good transfer of knowledge.
[C] Good understanding of information.
[D] Increased uncertainty.

**77 Complete the following statement. The most appropriate time for a pilot to give passengers an initial briefing on emergency procedures is:**

[A] During a pre-flight safety briefing.
[B] Just after take-off.
[C] While waiting at the hold for take-off.
[D] At the moment any emergency occurs; it is not necessary to worry them before that.

**78 Two pilots, both seated at the controls and qualified on type, have just commenced a flight when they experience an engine failure. Who should take control of the aircraft?**

[A] The more experienced of the two.
[B] The pilot in the left-hand seat.
[C] The captain.
[D] The pilot who, during the pre-flight briefing on emergencies, the captain agreed should take over control in such a situation.

**79 Which of the following attitudes and/or characteristics are not good communication and especially dangerous when flying?**

[A] Respect for other peoples' opinions.
[B] A highly developed sense of leadership.
[C] All of the above.
[D] Arrogance and aggressiveness.

**80 Which of the following are ways to help avoid stress in the cockpit?**

[A] All of the above.
[B] Modifying your pre-flight plan whenever you feel you are off-track or behind time.
[C] Not allowing yourself to be rushed into acting before you are ready.
[D] Having a cool drink at hand, at all times.

**81 What are Stress Factors or Stressors?**

[A] Pulse-rate inducers.
[B] Events and circumstances which cause stress.
[C] Circumstances or events which provoke any kind of reaction to the demands placed upon the human organism.
[D] Measures of stress exhibited by a person.

**82 An analogue display is generally better than a digital display for showing which sort of data?**

[A] Numerical.
[B] Qualitative.
[C] Quantitative.
[D] Subjective.

**83 Which of the following occur when a pilot is sitting too high in a cockpit?**
**a. Good downward outside view.**
**b. Poor view of instruments.**
**c. Upwards outside view obstructed.**

[A] Only a).
[B] a) and c) only.
[C] a) and b) only.
[D] a), b) and c).

**84 You are preparing for a training flight with an instructor and cannot find your checklist. You should:**

[A] Rely on the instructor to point out anything that you might have missed.
[B] Take time to find the checklist at the risk of missing part of your airborne time.
[C] Use a checklist for a different aircraft type.
[D] Perform the checks from memory.

**85 If advice is needed concerning possible flight with an illness, a pilot should contact:**

[A] Their family doctor.
[B] The general practitioner.
[C] An Aviation Medical Examiner.
[D] The nearest hospital.

**86 Which will always affect your ability to fly?**

[A] Homeopathic drugs.
[B] Antibiotics.
[C] Strong prescription analgesics and antihistamines.
[D] Over-the-counter analgesics and antihistamines.

**87 As a pilot, flying for long periods in hot summer temperatures increases the susceptibility of dehydration since the:**

[A] Moist air at altitude helps retain the body's moisture.
[B] Temperature decreases with altitude.
[C] Temperature increases with altitude
[D] Dry air at altitude tends to increase the rate of water loss from the body.

**88 Motion sickness is caused by:**

[A] The eyes working on to allocate the horizon when an aircraft is in constant movement.
[B] Continued stimulation of the tiny portion of the inner ear which controls sense of balance.
[C] Instability in the brain cells which affect balance and will generally be overcome with experience.
[D] The movement of an aircraft causing the stomach to create an acid substance which causes the stomach lining to contract.

**89 What suggestion could you make to your pilot fellow who is experiencing motion sickness?**

[A] Recommend taking medication to prevent motion sickness.
[B] Avoid unnecessary head movement and to keep her/his eyes on a point outside the aircraft.
[C] Recommend breathing into the paper bag.
[D] Lower her/his head, shut her/his eyes, and take deep breaths.

**90 In an unpressurised aircraft, at high altitudes the amount of oxygen that diffuses across the lung membranes into the blood is:**

[A] Decreased because of the low partial pressure of oxygen.
[B] Unchanged to that at sea level.
[C] Decreased because of the lower temperatures.
[D] Increased because of the high partial pressure of oxygen.

**91 During a climb to 18,000 ft, the percentage of oxygen in the atmosphere:**

[A] Increases.
[B] Remains the same.
[C] Explodes.
[D] Decreases.

**92 Hypoxia is the result of:**

[A] All answers are correct.
[B] Excessive nitrogen in the bloodstream.
[C] Insufficient oxygen in the air.
[D] Shortage of oxygen in the body.

**93 Which statement concerning hypoxia is true?**

[A] Forcing oneself to concentrate on the flight instruments will help to overcome the effects of hypoxia.
[B] Hypoxia is caused by nitrogen bubbles in the joints and bloodstream.
[C] Tingling of the skin and a false sense of security may be symptoms of hypoxia.
[D] Hypoxia is always easy to recognize.

**94 Which occurs when climbing above 18,000 feet in an unpressurized aircraft without supplemental oxygen?**

[A] The pressure in the middle ear becomes less than the atmospheric pressure in the cabin.
[B] The oxygen pressure within the lungs cannot be maintained without an increase in inhaled oxygen pressure.
[C] Gases trapped in the body contract and prevent nitrogen from escaping the bloodstream.
[D] The oxygen pressure within the lungs remains the same.

**95 Susceptibility to carbon monoxide poisoning increases as:**

[A] Altitude decreases.
[B] Altitude increases.
[C] Airspeed increases.
[D] Air pressure increases.

**96 Carbon monoxide in an aircraft cabin is:**

[A] Easily recognizable because of its peculiar odor.
[B] Easily recognizable because of its peculiar color.
[C] Difficult to recognize because of its odorless and colorless.
[D] Easier to recognize when flying over 18,000 feet because the level of the oxygen decreases.

**97 Large accumulations of carbon monoxide in the human body result in:**

[A] Hyperventilation.
[B] Tightness across the forehead.
[C] Loss of muscular power.
[D] An increased sense of well-being.

**98 What is one effect smoking has on a pilot?**

[A] Creates additional carbon dioxide gases in the body which often leads to hyperventilation.
[B] An increased sense of well-being.
[C] Increases body heat which, in turn, creates a demand for more oxygen.
[D] Decreases night vision by 50 percent.

**99 Which would most likely result in hyperventilation?**

[A] An extremely slow rate of breathing and insufficient oxygen.
[B] Emotional tension, anxiety, or fear.
[C] Chain smoking.
[D] The excessive consumption of alcohol.

**100 Rapid or extra deep breathing while using oxygen can cause a condition known as:**

[A] Aerotitis.
[B] Aerosinusitis.
[C] Hypoxia.
[D] Hyperventilation.

**101 Hyperventilation results from:**

[A] Flying too high without supplemental oxygen.
[B] Breathing too rapidly causing a lack of oxygen.
[C] A lack of carbon dioxide in the body.
[D] Excess carbon dioxide in the body.

**102 A pilot should be able to overcome the symptoms or avoid future occurrences of hyperventilation by:**

[A] Increasing the breathing rate in order to increase lung ventilation.
[B] Slowing the breathing rate, breathing into a bag, or talking aloud.
[C] Speeding up the breathing rate.
[D] Closely monitoring the flight instruments to control the airplane.

**103 If an individual has gone scuba diving which has required a controlled ascent and will be flying to cabin pressure altitudes of 8,000 feet or less, the recommended waiting time is at least:**

[A] 12 hours.
[B] 48 hours.
[C] 4 hours.
[D] 24 hours.

**104 Dark adaptation is impaired by exposure to:**

[A] Carbon dioxide.
[B] Nitrogen.
[C] Cabin pressure altitudes above 5,000 feet.
[D] Vitamin A in the diet.

**105 What preparation should a pilot make to adapt the eyes for night flying?**

[A] Avoid bright white lights at least 30 minutes before the flight.
[B] Wear sunglasses after sunset until ready for flight.
[C] Avoid red lights at least 30 minutes before the flight.
[D] Stay in the dark room at least 60 minutes before the flight.

**106 One aid in increasing night vision effectiveness would be to:**

[A] Increase intensity of interior lighting.
[B] Force the eyes to view off center.
[C] Look at far away.
[D] Look directly at objects.

**107 What is the most effective way to use the eyes during night flight?**

[A] Scan slowly to permit off-center viewing.
[B] Increase intensity of interior lighting.
[C] Concentrate directly on each object for a few seconds.
[D] Look only at far away, dim lights.

**108 The most effective technique to use for detecting other aircraft at night is:**

[A] Look at far away and scan slowly.
[B] To avoid staring directly at the point where another aircraft is suspected to be flying.
[C] Avoid scanning the region below the horizon so as to avoid the effect on ground light on the eyes.
[D] Turn the head and sweep the eyes rapidly over the entire visible region.

**109 The best method to use when looking for other traffic at night is to:**

[A] Look to the side of the object and scan slowly.
[B] Scan the visual field very rapidly.
[C] Look to the side of the object and scan rapidly.
[D] Avoid scanning the region below the horizon so as to avoid the effect on ground light on the eyes.

**110 Prior to starting each maneuver, pilots should:**

[A] Check altitude, airspeed, and heading indications.
[B] Always ask clearance from the tower.
[C] Announce their intentions on the nearest CTAF.
[D] Visually scan the entire area for collision avoidance.

**111 Which technique should a pilot use to scan for traffic to the right and left during straight-and-level flight?**

[A] Continuous sweeping of the windshield from right to left.
[B] Concentrate on relative movement detected in the peripheral vision area.
[C] Look at far away and scan slowly.
[D] Systematically focus on different segments of the sky for short intervals.

**112 What effect does haze have on the ability to see traffic or terrain features during flight?**

[A] All traffic or terrain features appear to be farther away than their actual distance.
[B] Haze causes the eyes to focus at infinity.
[C] The eyes tend to overwork in haze and do not detect relative movement easily.
[D] All traffic or terrain features appear to be closer than their actual distance.

**113 A state of temporary confusion resulting from misleading information being sent to the brain by various sensory organs is defined as:**

[A] Spatial disorientation.
[B] Hypoxia.
[C] Monochromatism.
[D] Hyperventilation.

**114 Which procedure is recommended to prevent or overcome spatial disorientation?**

[A] Systematically focus on different segments of the sky for short intervals.
[B] Reduce head and eye movements to the greatest extend possible.
[C] Avoid steep turns and rough control movements.
[D] Rely entirely on the indications of the flight instruments.

**115 Pilots are more subject to spatial disorientation if:**

[A] Eyes are moved often in the process of cross-checking the flight instruments.
[B] They ignore the sensations of muscles and inner ear.
[C] They ignore all the body signals.
[D] Body signals are used to interpret flight attitude.

**116 The danger of spatial disorientation during flight in poor visual conditions may be reduced by:**

[A] Leaning the body in the opposite direction of the motion of the aircraft.
[B] Shifting the eyes quickly between the exterior visual field and the instrument panel.
[C] Having faith in the instruments rather than taking a chance on the sensory organs.
[D] Systematically focus on different segments of the sky for short intervals.

**117 If a pilot experiences spatial disorientation during flight in a restricted visibility condition, the best way to overcome the effect is to:**

[A] Concentrate on yaw, pitch, and roll sensations.
[B] Increase breathing rate.
[C] Consciously slow the breathing rate until symptoms clear and then resume normal.
[D] Rely upon the aircraft instrument indications.

**118 A rapid acceleration can create the illusion of being in a:**

[A] Left turn.
[B] Tailspin.
[C] Nose up attitude.
[D] Nose down attitude.

**119 Who has the final responsibility whether a pilot is fit to fly for a particular flight, even though he or she holds a current medical certificate?**

[A] The medical examiner.
[B] The ATC.
[C] The FA-1.
[D] The pilot.

**120 What is the one common factor which affects most preventable accidents?**

[A] Human error.
[B] Opponents error.
[C] Mechanical malfunction.
[D] Structural failure.

**121 Consistent adherence to approved checklists is a sign of:**

[A] Disciplined and competent pilot.
[B] Pilot with the lack of stress management.
[C] Low-time pilot.
[D] Pilot who lacks the required knowledge.

**122 To avoid missing important steps, always use the:**

[A] Airworthiness certificate.
[B] Placarded airspeeds.
[C] Appropriate checklists.
[D] Pilot's manual book.

**123 The positive three-step process in the exchange of flight controls between pilots includes these verbal steps: (a) You have the flight controls, (b) I have the flight controls, and c) ____.**

[A] You have the flight controls.
[B] I have the aircraft.
[C] I have the flight controls.
[D] I have the aircraft and the flight controls.

**124 Risk management, as a part of aeronautical decision making ADM process, relies on which features to reduce the risk associated with each flight?**

[A] Application of stress management and risk element procedures.
[B] All answers are correct.
[C] Situational awareness, problem recognition, and good judgment.
[D] The mental process of analyzing all information in a particular situation and making a timely decision on what action to take.

**125 Hazardous attitudes occur to every pilot to some degree at some time. What are some of these hazardous attitudes?**

[A] Poor risk management and lack of stress management.
[B] Antiauthority, impulsivity, macho, resignation, and invulnerability.
[C] Poor situational awareness, snap judgments, and lack of a decision making process.
[D] All answers are correct.

**126 In the aeronautical decision making (ADM) process, what is the first step in neutralizing a hazardous attitude?**

[A] Recognizing hazardous thoughts.
[B] Minimize the damages.
[C] Recognizing the invulnerability of the situation.
[D] Making a rational judgment.

**127 What is the antidote when a pilot has a hazardous attitude, such as "impulsivity"?**

[A] Not so fast, think first.
[B] Do it quickly to get it over with.
[C] I don't care.
[D] It could happen to me.

**128 What is the antidote when a pilot has a hazardous attitude, such as "Antiauthority"?**

[A] Follow the rules.
[B] I know what I am doing.
[C] Rules do not apply in this situation.
[D] I don't care.

**129 What is the antidote when a pilot has the hazardous attitude of "invulnerability"?**

[A] I don't care.
[B] It will not happen to me.
[C] It can not be that bad.
[D] It could happen to me.

**130 At altitude the pressure of oxygen in the atmosphere is:**

[A] Lower than at MSL.
[B] Higher than at MSL.
[C] Unaffected, as partial pressure is independent of altitude.
[D] The same as at mean sea level (MSL).

**131 Being badly overweight increases a pilot's susceptibility to which of the following conditions?**

[A] Hypoxia at higher altitudes.
[B] Hypothermia.
[C] Heart attack.
[D] All of the above.

**132 "Error" is a generic term which describes all those occasions when a series of mental or physical activities do not achieve their intended effect. Now, complete the following statement. Errors:**

[A] May be isolated or cumulative.
[B] Are always part of the error chain.
[C] Are isolated with no further consequence or influence.
[D] Are cumulative, one error leads to a second, which leads to a third etc.

**133 Which statement is true regarding alcohol in the human system?**

[A] Alcohol renders a pilot more susceptible to hypoxia.
[B] Coffee helps metabolize alcohol and alleviates a hangover.
[C] Small amount of alcohol will improve activity.
[D] Small amounts of alcohol will not impair flying skills.

**134 Which statement best defines hypoxia?**

[A] An abnormal decrease in the volume of air breathed.
[B] A condition of gas bubble formation around the joints or muscles.
[C] An abnormal increase in the volume of air breathed.
[D] A state of oxygen deficiency in the body.

**135 An illusion, that an aircraft is at a higher altitude than it actually is, is produced by:**

[A] Upsloping terrain.
[B] Wide runway.
[C] Downsloping terrain.
[D] Atmospheric haze.

**136 The three-needle type altimeter used in many light aircraft is:**
**a) Easy to mis-read.**
**b) Hardly ever mis-read.**
**c) Accurate and reliable.**
**d) Not very accurate or reliable.**

[A] Only b).
[B] Only a).
[C] a) and c).
[D] b) and d).

**137 Which of the following are terms generally used to describe a type or types of memory within the subject of Human Performance and Limitations?**

[A] All of them.
[B] Felicitous memory.
[C] Sensitive memory.
[D] Long-term memory.

**138 The outer, middle and inner ear are filled with:**

[A] Air, liquid, and liquid, respectively.
[B] Air, air, and liquid, respectively.
[C] Liquid, air, and air, respectively.
[D] Liquid, liquid, and air, respectively.

**139 Presbycusis is an impairment of hearing due to:**

[A] Damage to the semi-circular canals.
[B] Smoking.
[C] Age.
[D] Damage to the cochlea.

**140 What causes conductive deafness?**

[A] Damage to the middle ear.
[B] Damage to the ossicles or the eardrum.
[C] Damage to the outer ear.
[D] Damage to the pinna.

**141 In which part of the eye is visual acuity at its highest?**

[A] The Cornea.
[B] The Retina.
[C] The Pupil.
[D] The Fovea.

**142 In order to see a sharp image of an oncoming aircraft which has been detected by the eye, a pilot should:**

[A] Commence a systematic scan of the airspace in front of him.
[B] Blink several times to make the image clearer.
[C] Look to one side of the oncoming aircraft.
[D] Look directly at the oncoming aircraft.

**143 The amount of light entering the eye is controlled by the:**

[A] Cornea.
[B] Retina.
[C] Pupil.
[D] Lens.

**144 Which of the following carries oxygen throughout the body?**

[A] Red blood cells (erythrocytes).
[B] Water.
[C] Plasma.
[D] White blood cells (leucocytes).

**145 High blood pressure, heart diseases and diabetes are related to:**

[A] Cholera.
[B] Obesity.
[C] Lack of oxygen.
[D] Anorexia nervosa.

**146 What causes blue lips?**

[A] Lack of oxygen.
[B] Positive G-forces.
[C] Hyperventilation.
[D] Carbon monoxide intoxication.

**147 Which of the following gases is related to decompression sickness?**

[A] Nitrogen.
[B] Hydrogen.
[C] Carbon dioxide.
[D] Oxygen.

**148 Learning to fly can be stressful because the student pilot is in situation without a fully control. The most likely symptom of stress is:**

[A] Sleepiness, the rise of smoking and drinking.
[B] Nervousness, muscle tension and attention issues.
[C] The sense of hunger, sleepiness and optical illusions.
[D] Rough handling of the aircraft and general confusion.

**149 The body gets energy from:**

[A] Proteins and vitamins.
[B] Carbohydrates, proteins and fats.
[C] Minerals, carbohydrates and vitamins.
[D] Minerals and vitamins.

**150 Which of the following goes through the capillaries thin walls?**

[A] Gases.
[B] Red blood cells.
[C] Proteins.
[D] Water.

**151 Which of the following statements is true?**

[A] Increasing the altitude reduces alcohols harmful effects.
[B] Even small amounts of alcohol may decline evaluation ability.
[C] A human body burns alcohol faster if you drink coffee at the same time.
[D] Alcohol improves the visual acuity.

**152 Which of the following cases can be described as "a sudden incapasitaon"?**

[A] Rapidly developing abnormal aircraft attitude
[B] Appendicitis
[C] Pilot is not able to take actions during a flight
[D] Engine failure in critical flight phase

**153 Carbon monoxide is:**

[A] Stinging smelling, colorless gas
[B] Tasteless and grey gas
[C] Odorless, tasteless and colorless gas
[D] Crucial for humans

**154 How much air pressure has dropped when climbing to 18 000 feet?**

[A] 10%
[B] 25%
[C] 50%
[D] 80%

**155 The most important controller of breathing is:**

[A] Breathing rate
[B] Nitrogen
[C] Oxygen
[D] Carbon dioxide

**156 Gas exchange takes place in the:**

[A] Alveoli
[B] Aorta
[C] Pulmonary artery
[D] Bronchus

**157 Flying when suffering from flu symptoms:**

[A] Heals flu symptoms quickly
[B] Weakens night vision
[C] Increases tendency to suffer from blocked ears
[D] May cause illusions when making turns

**158 Where human's sence of balance is located?**

[A] In the inner ear
[B] In "seat of the pants" and lower limbs
[C] In hypophysis
[D] In the middle ear

**159 In red blood cells oxygen attracts to:**

[A] Carbon monoxide
[B] Hematocrit
[C] Hemoglobin
[D] Carbon dioxide