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(Most Important Questions On Animal Physiology)

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Sahi Prep Hai Toh Life Set Hai

1.Excess quantity of thyroid hormones is associated with which of the following disease?
A. Hashimotos thyroiditis
B. Cushing syndrome
C. Graves disease
D. Haemophilia

2.The number of oxygen atoms carried by each haemoglobin molecule is
A. 4 B. 5
C. 8 D. 2

3.The quantity of protein in plasma that is considered normal varies from
A. 10-12g/dl
B. 24-30g/dl
C. 2-5g/dl
D. 6-8g/dl

4.Which of the following statement about the circulatory system is true?
A. Hormones are transported in blood
B. All vertebrates have an open immune system
C. Capillaries have thicker walls than veins
D. Systemic circulation carries blood to and from lungs

5.Action potentials are conducted more rapidly in
A. Small diameter axons than large-diameter axons.
B. Unmyelinated axons than myelinated axons
C. Saltatory conduction
D. Large diameter axons than small-diameter axons.

6.Long term reflex actions such as cycling and swimming are controlled by
A. Spinal cord
B. Hypothalamus
C. Cerebellum
D. Cerebrum

7.Which of the following is not done by glial cells?
A. Receiving and conducting electrochemical signals
B. Giving metabolic support to neurons
C. Producing insulating sheaths around axons
D. Removing debris after death of neuron

8.Bohr effect in haemoglobin describe which of the following?
A. Higher pH found in actively metabolic tissues
B. Effect of pH on haemoglobin and myoglobin
C. Increased affinity for O2 at lower pH
D. Decreased affinity for O2 at lower pH

9.Rate of impulse conduction in nerve depends on
A. Axon diameter and axon length
B. Axon length and number of dendrites
C. myelination and nuclear size
D. Axon diameter and thickness of myleination

10.Most abundant protein in human blood is
A. Albumin B. Transferrin
C. Hemoglobin D. γ –globulin

ANSWERS

1. C	2. A	3. D	4. A	5. C	6. A
7. A	8. D	9. D	10. A		

Solutions

Solution 1:Graves' disease is an immune system disorder that results in the overproduction of thyroid hormones (hyperthyroidism). Although a number of disorders may result in hyperthyroidism, Graves' disease is a common cause.

Solution 2:Hemoglobin, or Hb, is a protein molecule found in red blood cells (erythrocytes) made of four subunits: two alpha subunits and two beta subunits. Each subunit surrounds a central heme group that contains iron and binds one oxygen molecule, allowing each hemoglobin molecule to bind four oxygen molecules.

Solution 3:The normal serum protein level is 6 to 8 g/dl. plasma proteins constitute around 7% of plasma by weight[2] and 0.5% of total body mass. Serum albumin accounts for around 55% of plasma protein (typical reference range: 35–55 g/l).

Solution 4:Hormones travel throughout the body, either in the blood stream or in the fluid around cells, looking for target cells. Once hormones find a target cell, they bind with specific protein receptors inside or on the surface of the cell and specifically change the cell's activities. Though few hormones circulate dissolved in the blood-stream, most are carried in the blood, bound to plasma proteins. For example, steroid hormones which are highly hydrophobic, are transported bound to plasma proteins.

Solution 5:Saltatory conduction is the propagation of action potentials along myelinated axons from one node of Ranvier to the next node, increasing the conduction velocity of action potentials. Saltatory conduction occurs in myelinated axons from one node of Ranvier to the next node. Therefore, the action potential is only generated at the neurofibrils in myelinated axons. Hence, it is faster than continuous conduction.

Solution 6:Spinal Cord regulates and conducts the reflex action. Reflex actions are of 2 types: (A. Cranial reflex: These actions are completed by brain. No urgency is required for these actions these are slow actions e.g. watering of mouth to see good food. (B. Spinal reflex: These actions are completed by spinal cord. Urgency is required for these actions. These are very fast actions. e.g. Displacement of the leg at the time of pinching by any needle.

Solution 7:Glial cells have four main functions: (1) to surround neurons and hold them in place; (2) to supply nutrients and oxygen to neurons; (3) to insulate one neuron from another; (4) to destroy pathogens and remove dead neurons.

Solution 8:The Bohr effect refers to the shift in the oxygen dissociation curve caused by changes in the concentration of carbon dioxide or the pH of the environment.Conversely, a decrease in carbon dioxide provokes an increase in pH, which results in hemoglobin picking up more oxygen.

Solution 9:Along with the thickness of myelination of the axon, the diameter of the axon can influence the speed of conduction. The two main factors are insulation by the myelin sheath and the diameter of the axon.

Solution 10:Albumin is the most abundant protein in the blood and accounts for about 50 percent of all plasma proteins.

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