Class 10 Science · Chapter 6: Control and Coordination

Worksheet · 20 marks · about 40 minutes · based on NCERT

Name _____ Class and section _____ Date _____

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1. After an injury to the back of the head, a patient has difficulty controlling his blood pressure and cannot stop frequent vomiting. The part of the brain most likely damaged is the [1]

(a) cerebellum
(b) medulla
(c) fore-brain
(d) hypothalamus

2. A tea taster sips a cup and judges how sweet it is. The receptors on her tongue that respond to the sugar are [1]

(a) olfactory receptors
(b) motor neurons
(c) gustatory receptors
(d) relay neurons

3. A small animal with very little of the complex neuron network needed for thinking steps on a sun-heated stone and pulls its leg back at once. It can respond so quickly because [1]

(a) the response runs through a reflex arc, which does not wait for the brain's thinking
(b) its muscles contract on their own without any nerves
(c) its receptors for heat lie inside the spinal cord
(d) thinking in such an animal is faster than a reflex

4. Which two together make up the central nervous system? [1]

(a) the brain and the cranial nerves
(b) the brain and the spinal cord
(c) the spinal cord and the spinal nerves
(d) the cranial nerves and the spinal nerves

5. The withdrawal of a foot from a sharp nail does not wait for a conscious decision because [1]

(a) the muscles of the leg are not connected to the brain
(b) the brain never receives any information about the nail
(c) thinking involves many impulses through many neurons and would take too long
(d) receptors in the skin send their signals only to the spinal cord

6. Twins Aman and Aarti, aged 11, both begin to show changes in appearance. Name the hormone responsible for these changes in each of them. [2]

7. A doctor feels the front of a patient's neck for one endocrine gland and orders a scan of the top of the kidneys for another. Name the two glands. [2]

8. Messages pass between a sprinter's central nervous system and the muscles of his legs and face. Name the two kinds of nerves of the peripheral nervous system and state where each arises. [2]

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9. A plant physiologist studies one bean plant. Name the plant hormone most involved in each: (i) rapid cell division in the developing pods and seeds, (ii) the lengthening of the stem, besides auxin, (iii) the wilting of leaves as growth slows during a dry spell. [3]

10. A child walking barefoot steps on a thorn and lifts her foot at once. Trace the path of the signal from the thorn to the muscle that lifts the foot, naming each part, and state what else happens to the information. [3]

11. A model of the human brain in a school laboratory has three pieces: X, the large folded part on top; Y, a small part lying below and behind X; and Z, a group made of the pons, the medulla and the cerebellum. Name the region of the brain each piece stands for, and give one function of X and one of the cerebellum. [3]