

परमाणु ऊर्जा शिक्षण संस्था, मुंबई
Atomic Energy Education Society
Session-2023-24

Class: X

Subject: Science(Biology)

WORKSHEET NO-2

Name of the Chapter: Control and Coordination

Name of the Topic: Control and Coordination

I. Choose the correct option from the following. 1x10=10

1. The longest fibre on the cell body of a neuron is called
(a) sheath (b) cytoplasm (c) axon (d) dendrites
2. Which nerves transmit impulses from the central nervous system towards muscle cells?
(a) Sensory nerves (b) Motor nerves (c) Relay nerves (d) Cranial nerves
3. A microscopic gap between a pair of adjacent neurons over which nerve impulses pass is called
(a) neurotransmitter (b) dendrites (c) axon (d) synapse
4. The main function of cerebrum is
(a) thinking (b) hearing (c) memory (d) balancing
5. The posture and balance of the body is controlled by
(a) Pons (b) Medulla oblongata (c) Cerebellum (d) Cerebrum
6. Identify which of the following statements about thyroxin is incorrect?
(a) Thyroid gland requires iodine to synthesize thyroxin.
(b) Thyroxin is also called thyroid hormone.
(c) It regulates protein, carbohydrates and fat metabolism in the body.
(d) Iron is essential for the synthesis of thyroxin.
7. A diabetic patient suffers from deficiency of which hormone?
(a) Thyroxine (b) Testosterone (c) Oestrogen (d) Insulin
8. Any change in the environment to which an organism responds is called
(a) stimulus (b) coordination (c) response (d) hormone

9. Which plant hormone promotes cell division?
(a) Auxin (b) Gibberellin (c) Cytokinin (d) Abscisic acid
10. Response of plant roots towards water is called:
(a) Chemotropism (b) Phototropism (c) Hydrotropism (d) Geotropism

II. Fill in the blanks with suitable word/s.

1x10=10

1. Control and coordination are the functions of the nervous system and in our body.
2. The nervous system uses impulses to transmit messages.
3. Central nervous system consists of and
4. Largest part of the brain is
5. Deficiency of hormone in childhood leads to dwarfism in humans
6. The growth of pollen tubes towards the ovules is the result of a
7. ___ gland is present on the upper side of the kidney.
8. The movement of plants in response to touch is called ___.
9. ___ hormone is responsible for maintaining the water concentration in the body.
10. The stress hormone is _____

III. Answer the following questions.

2x10=20

1. What is a phytohormone? Name any two phytohormones.
2. Mention the receptors for light and sound in animals.
3. Differentiate between tropic and nastic movements.
4. Name the hormones secreted by thyroid, parathyroid and pancreas.
5. Write name of two hormones secreted by the pituitary gland.
6. What are hormones?
7. Name any two phytohormones, which are growth promoters.
8. Which plant hormone is responsible for the wilting and falling of leaves?
9. Give one example each of a plant part:
(a) Which is positively hydrotropic as well as positively geotropic.
(b) Which is positively phototropic but negatively geotropic.
10. What is meant by nastic movements in plants? Give one example of nastic movements in plants?

IV. Answer the following questions.

3x5=15

1. Name the diseases by which a person is likely to suffer due to the deficiency of:
(i) Iodine; (ii) Insulin
(b) How the timing of secretion and amount of hormone secretion are regulated in human system. Explain with example.
2. Define the following:
(a) Reflex action
(b) Synapse
(c) Phototropism
3. Mention three characteristic features of hormonal secretions in human beings.
4. Name the system which facilitates communication between central nervous system and the other parts of the body. Mention two types of nerves it consists of along with their organs of origin.
5. What is reflex arc? Draw a labelled diagram to show reflex arc on touching a very hot object?

IV. Answer the following questions.

5x5=25

1. Smita's father has been advised by a doctor to reduce his sugar intake.
a) Name the disease he is suffering from and name the hormone whose deficiency is?
b) Identify the gland that secretes it and mention the function of this hormone.
c) Explain how the time and amount of secretion of this hormone is regulated in human system.
2. (a) How is brain protected from injury and shock?
(b) Name two main parts of hind brain and state the functions of each.
3. List in tabular form differences between nervous system and endocrine system.
4. (a) Name the hormone which is released into the blood when its sugar level rises. Explain the need of Chemical communication in multicellular organisms the organ which produces this hormone and its effect on blood sugar level. Also mention the digestive enzymes secreted by this organ with one function of each.
(b) Explain the need of Chemical communication in multicellular organisms.
5. (a) Name the two main constituents of the Central Nervous System in human beings.
(b) What is the need for a system of control and coordination in human beings?

XX