WORKSHEET 2

CHAPTER 2 – CONTROL AND COORDINATION

A. Tick (✓) the correct option.

1. Which of the following is a growth inhibitor?
   a. Gibberellin b. Auxin c. Abscisic acid d. Cytokinin
2. In a neuron, conversion of electrical signal to a chemical signal occurs at
   a. cell body. b. axonal end. c. dendritic end. d. axon.
3. Dwarfism results due to
   a. excess secretion of thyroxine. b. less secretion of growth hormone.
   c. less secretion of adrenaline. d. excess secretion of growth hormone.
4. Junction between two neurons is called
   a. cell junction. b. neuromuscular junction.
   c. neural joint. d. synapse.
5. Posture and balance of the body is controlled by
   a. cerebrum. b. cerebellum. c. medulla. d. pons.

B. Fill in the blanks.

1. In animals, hormones are secreted by _____
2. The _____ gland is found above the kidney.
3. The brain is enclosed in a box called _____
4. _____ is plant's response to contact with hard surface.
5. _____ receptor lie on the tongue.

C. Answer is one word.

1. Endocrine gland present just above the heart.
2. Hormone whose deficiency causes dwarfism.
3. Endocrine gland present in males but not in females.
4. Plant hormone responsible for falling of senescent leaves.
5. Plant hormone synthesized at the shoot tip.

D. State true (T) or false (F).

1. Cerebrum is a part of forebrain.
2. Human brain and spinal cord are solid.
3. Olfactory receptor lie in the ear.
4. Parathormone is produced by adrenal gland.
5. Thyroid gland requires iron to synthesize thyroxine.

Name: ..... Teacher's signature: .....

Class: X Date: .....

E. Answer the following questions.

1. How do auxins promote the growth of a tendril around a support?
2. Compare and contrast nervous and hormonal mechanisms for control and coordination in animals.
3. How are involuntary actions and reflex actions different from each other?
4. How do muscle cells respond when a nervous electrical impulse reaches it?
5. How do *Mimosa* leaves show movement when touched with a finger?

ANSWERS

WORKSHEET 2

A. Tick (✓) the correct option.

1. c 2. b 3. b 4. d 5. b

B. Fill in the blanks.

1. Endocrine glands 2. Adrenal 3. Cranium 4. Thigmotropism 5. Gustatory

C. Answer in one word.

1. Thymus gland 2. Growth hormone 3. Testes 4. Abscisic acid 5. Auxin

D. State true (T) or false (F).

1. T 2. F 3. F 4. F 5. F

E. Answer the following questions.

1. Tendrils are sensitive to touch. As the tendrils come in contact with a support, auxin is diffused from its site of synthesis (tip) towards the side of the tendril away from the support than the side in contact with the support. As a result, the side having more auxin grows faster than the one in contact with support. This causes the tendril to circle around the support.

2.

	Nervous system	Hormonal system
(*i*)	Information conveyed in the form of electric impulse.	Information conveyed in the form of chemical messengers.
(*ii*)	Axons and dendrites transmit the information in a coordinated manner.	Information transmitted through blood.
(*iii*)	The flow of information is rapid and the response is quick.	The information travels slowly and the response is slow.
(*iv*)	Effects are short lived.	Effects are prolonged.

3.

	Involuntary action	Reflex action
(*i*)	Occur in response to internal stimuli.	Operate against harmful stimuli which are generally external.
(*ii*)	Some time gap occurs between stimulus and response.	They are almost instant.
(*iii*)	They are carried out by smooth muscles.	They are performed by striated muscles.

4. Muscle cells have special protein that change both their shape and their arrangement in response to nervous electrical impulses. When this happens, new arrangements of these proteins give the muscle cell a shorter form.

5. Plants communicate that a touch has occurred through electrochemical means. Plant cells change shape by changing the amount of water in them, resulting in swelling or shrinking, therefore changing of shapes can be seen. This causes folding up and drooping of leaves.