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(CBCS)

(5th Semester)

ZOOLOGY

SIXTH PAPER

(Animal Physiology)

Full Marks : 75

Time : 3 hours

The figures in the margin indicate full marks for the questions

(SECTION : A—OBJECTIVE)

(*Marks* : 10)

Tick (✓) the correct answer in the brackets provided : 1×10=10

1. The secretion of HCl and pepsinogen from the gastric glands in the stomach is stimulated by

(a) enterokinase ( )

(b) rennin ( )

(c) digestin ( )

(d) gastrin ( )

2. In which part of the respiratory system, gaseous exchange takes place in?

(a) Alveoli ( )

(b) Pharynx ( )

(c) Larynx ( )

(d) Trachea ( )

3. The opening between right atrium and right ventricle is guarded by the valve named

(a) mitral valve ( )

(b) tricuspid valve ( )

(c) bicuspid valve ( )

(d) semilunar valve ( )

4. The function of globin is to

(a) form protective hydrophilic pocket ( )

(b) prevent conversion of ferrous to ferric form ( )

(c) prevent conversion of ferric to ferrous ( )

(d) bind pepsin ( )

5. The hormone secreted by the hypothalamus to increase fluid reabsorption is

(a) aldosterone ( )

(b) rennin ( )

(c) antidiuretic hormone ( )

(d) angiotensin ( )

6. The most toxic form of nitrogenous waste which needs a huge amount of water for its removal from the body is

(a) guanine ( )

(b) ammonia ( )

(c) urea ( )

(d) uric acid ( )

7. In the sliding filament model of muscle contraction, the myofilaments slide over each other, resulting in the overlapping of

(a) myosin and actin ( )

(b) troponin and tropomyosin ( )

(c) tropomyosin and Z-line ( )

(d) troponin and Z-line ( )

8. Each muscle fibre is surrounded by a thin layer of connective tissue known as

(a) perimysium ( )

(b) endomysium ( )

(c) epimysium ( )

(d) sarcoplasm ( )

9. A small gap between two neurons, where nerve impulses are relayed by a neurotransmitter from the presynaptic neuron to the postsynaptic neuron is known as

(a) synapse ( )

(b) axon ( )

(c) dendrites ( )

(d) neurotransmitters ( )

10. Which part of a neuron receives signals from other neurons and transfer the information to the soma of the neuron?

(a) Telodendria ( )

(b) Axon ( )

(c) Dendrites ( )

(d) Myelin sheath ( )

(SECTION : B—SHORT ANSWER)

(*Marks* : 15)

Write short notes on the following : 3×5=15

UNIT—I

1. Difference between extracellular and intracellular digestions

OR

2. Types of respiration

UNIT—II

3. Pacemaker

OR

4. Blood groups

UNIT—III

5. Micturition

OR

6. Nitrogenous wastes

UNIT—IV

7. Muscle fatigue

OR

8. Isotonic and isometric contractions

UNIT—V

9. Different types of neurons

OR

10. Action potential

(SECTION : C—DESCRIPTIVE)

(*Marks* : 50)

Answer the following : 10×5=50

UNIT—I

1. Describe the process of digestion of fats with suitable schematic representation.

OR

2. What do you mean by respiration? Describe the mechanism of gill respiration.

UNIT—II

3. Give an account of open and closed types of circulatory system.

OR

4. Write an account on the structure and function of haemoglobin.

UNIT—III

5. Describe the physiology of urine formation.

OR

6. Describe the different types of nitrogenous wastes in ammonotelic animals.

UNIT—IV

7. Give a brief account of contractile and regulatory muscle proteins.

OR

8. Discuss in detail the process of muscle contraction in a skeletal muscle.

UNIT—V

9. What is a neuron? With the help of a diagram describe the ultra-structure of a typical neuron.

OR

10. What is a nerve impulse? Describe the mechanism of propagation of nerve impulse in a non-myelinated nerve fibre.

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