

[78]



Seat no: _____

No. of Pages:2

SARDAR PATEL UNIVERSITY

B.Sc., V-SEMESTER EXAM, OCTOBER-2025

ZOOLOGY, US05CZOO22 (PHYSIOLOGY)



DATE: 6/10/2025, MONDAY

TIME: 10AM to 1PM

MARKS: 70

Q-1. MULTIPLE CHOICE QUESTIONS.

(10)

1. The structural and functional unit of skeletal muscle is known as
(a) Sarcolemma (b) Sarcomere (c) Sarcoplasm (d) SR
2. The smooth muscles are found in walls of
(a) urinary bladder (b) blood vessels (c) alimentary canal (d) all of above
3. Autorhythmicity is a property of the muscles of the
(a) Liver (b) Intestine (c) Heart (d) Kidney
4. The white fatty substance that coats axons to increase signal speed is
(a) Myelin (b) Microfibrils (c) Dendrites (d) Adipocytes
5. The structural and functional unit of the nervous system is:
(a) Axon (b) Neuron (c) Dendrite (d) Brain
6. The largest part of the human brain is
(a) Cerebellum (b) Medulla (c) Cerebrum (d) Hypothalamus
7. Which nerve connects the eye to the brain?
(a) Auditory nerve (b) Optic nerve (c) Olfactory nerve (d) Spinal nerve
8. The autonomic nervous system is divided into:
(a) Somatic and Sympathetic (b) Afferent and Efferent
(c) Sympathetic and Parasympathetic (d) Spinal and Cranial
9. Hypersecretion of GH during childhood causes
(a) Gigantism (b) Cretinism (c) Dwarfism (d) Goiter
10. Chemical messengers secreted by ductless glands are called _____
(a) Lymph (b) Hormones (c) Plasma (d) Platelets

(1)

[P. T. O.]

Q-2. ANSWER THE FOLLOWING QUESTION IN SHORT. (ANY TEN)

(20)

1. Differentiate between smooth and skeletal muscle fiber.
2. Explain the muscle fatigue.
3. Name the properties of muscle fiber.
4. Write about neuroglia.
5. Draw & labeled the diagram of nerve fiber.
6. Write about functions of nerve fiber.
7. Explain the term conditional reflex with example.
8. Write about the significance of external ear (Pinna) in Human.
9. Enlist the name of taste buds present in Tongue.
10. Write about general functions of the endocrine glands.
11. Give the outline of chemical classification of hormones.
12. Enlist the name of endocrine glands present in Human.



Q-3. (A) Explain the neuromuscular junction (NMJ) with labeled diagram. (5)

(B) Write a note on microscopic structure of smooth muscle fiber. (5)

OR

Q-3. Explain the production of ATP by energy molecule in skeletal muscles. (10)

Q-4. (A) Describe the transmission of nerve impulse on unmyelinated nerve fiber. (7)

(B) Write about morphological classification of nerve fiber. (3)

OR

Q-4. Describe the Human brain with labeled diagram. (10)

Q-5. (A) Write about functions of Sympathetic & Parasympathetic nervous system. (6)

(B) Name and number the cranial nerves. (4)

OR

Q-5. (A) Describe the reflex action by labeled diagram. (6)

(B) Explain the working mechanism of Phonoreceptor. (4)

Q-6. Describe the functions & abnormalities of Pituitary hormones. (10)

OR

Q-6. (A) Describe the secretion, functions of thyroid hormone. (6)

(B) Explain the action of lipid soluble hormone. (4)

← X ←
(2)