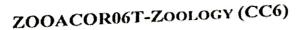


## WEST BENGAL STATE UNIVERSITY B.Sc. Honours 3rd Semester Examination, 2023-24





Full Marks: 40

Time Allotted: 2 Hours

The figures in the margin indicate full marks.

Candidates should answer in their own words and adhere to the word limit as practicable.

All symbols are of usual significance.

 $2 \times 8 = 16$ 

- 1. Answer any eight questions from the following:
  - (a) What is sarcoplasm?
  - (b) Mention two types of adhesive junctions of epithelial tissue.
  - (c) Comment on negative feedback mechanism.
  - (d) What is corpus luteum?
  - (e) Comment on hyaline cartilage.
  - (f) What is antrum? State its function.
  - (g) What is gradient potential? What do you mean by "All or None" Law?
- (h) Delineate the saltatory conduction of impulse.
- (i) Why is the connective tissue so named?
- (j) Mention the functions of osteoclast and osteoblast cells.
- (k) State the functions of seminiferous tubules.
- (I) What is a neuromuscular junction? What is resting potential?
- 2. Answer any three questions from the following:

 $3\times3=9$ 

- (a) What is capacitation of mammalian sperm?
- (b) Delineate the role of hypothalamus in regulating sexual function of human male.
- (c) How does reflex arc formed? Mention a respiratory reflex.

1+2

- (d) Distinguish between insulin and glucagon functions.
- (e) Name a glial cell that surrounds axon of peripheral nerve. What do you mean by neurotransmitters?

1+2

3. Answer any three questions from the following:

 $5 \times 3 = 15$ 

(a) Delineate different adrenal cortical layers. Why are they so named? Mention the functions of hormones released by these layers.

(1+1)+3

- (b) State the role of myofibrillar proteins in skeletal muscle contraction.
- (c) Draw, label and describe the T.S. of a mammalian thyroid gland.
- (d) Distinguish between:

 $2\frac{1}{2}+2\frac{1}{2}$ 

- (i) Cardiac muscle and skeletal muscle
- (ii) Collagen fibre and reticular fibre.
- (e) What do you mean by ossification? Discuss the process in brief.

1+4

1