

**U.G. 3rd Semester Examination - 2019****ZOOLOGY****[HONOURS]****Course Code : ZOOL(H)CC-06-T**

Full Marks : 40

Time :  $2\frac{1}{2}$  Hours*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.*

1. Answer any five questions:  $2 \times 5 = 10$
- a) Name two organs where ciliated epithelium cells are found and mention their functions?
  - b) What is the difference between chondroblasts and chondrocytes?
  - c) What is calsequestrin?
  - d) Give examples of receptors with intrinsic enzyme activity?
  - e) What is spermatogenesis?
  - f) What is titin?
  - g) What is corpus luteum?

*[Turn over]*

h) What is Wolff's Law?

2. Answer any **two** questions:  $5 \times 2 = 10$

a) What are EPPs? How does the neuron at a neuromuscular junction interact with the muscle to which it is attached?  $1 + 4 = 5$

b) Diagrammatically classify different types of epithelial cells. Describe various functions of epithelium.  $2 + 3 = 5$

c) Distinguish between reflex action and reflex arc. Describe somatic reflex arc with proper diagram.  $2 + 3 = 5$

d) Describe histology of pituitary gland with proper diagram?  $3 + 2 = 5$

3. Answer any **two** questions:  $10 \times 2 = 20$

a) What is synapse? Describe structure of a synapse with proper diagram. Describe saltatory conduction in neuron.  $2 + 3 + 5 = 10$

b) What is sarcomere? Describe sarcotubular system with proper diagram. Describe physiology of muscle contraction.  $2 + 3 + 5 = 10$

c) What is second messenger? Describe various types of receptors responsible for hormone

action. Describe role of cAMP in hormone action.  $2+4+4=10$

- d) Name two nuclei present in the anterior medial region of the hypothalamus. Name major hormones secreted from the anterior pituitary along with their functions. Give detailed histological structure of testis with proper diagram.  $2+4+4=10$