

U.G. 3rd Semester Examination - 2021**ZOOLOGY****Course Code : BZOCCHC302****Course Title : Animal Physiology : Controlling & Coordinating System**

Full Marks : 30

Time : 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 **ten** questions from the following:

1×10=10

- a) Name two amino acid derivative hormones.
- b) What is the function of calmodulin?
- c) What is the functional unit of muscular system?
- d) What do you mean by C19 steroid?
- e) What is the major function of seminiferous tubule?
- f) Define interneurons.
- g) What is corpus albicans?

- h) What is the dominant component of extracellular matrix of the hyaline cartilage?
- i) Dermal glands are formed from what type of tissues?
- j) Explain inhibin.
- k) What is the origin of connective tissues?
- l) Which hormone stimulates bone resorption?
- m) What do you mean by zonula occludens?
- n) What is the relation between FSH-LH surge and ovulation?
- o) Explain Titin protein.

2. Answer any **five** questions from the following:

2×5=10

- a) What do you mean by sarcoplasm?
- b) Write down the significance of Schwann cell.
- c) Describe the histology of mammalian testis with labelled diagram.
- d) What is transitional epithelium? Write down its function.
- e) Differentiate diabetes mellitus and diabetes insipidus.
- f) What is the difference between estrous and menstrual cycle?

g) What do you mean by afferent and efferent neurons?

h) What is corpus luteum? State its major function.

3. Answer any **two** questions from the following:

5×2=10

a) What is second messenger? Schematically describe how a peptide hormone takes action with the help of a second messenger. 1+4

b) Write briefly on: 2+2+1

i) Osteomalacia and osteoporosis.

ii) Chromaffin cells.

iii) Zona fasciculata and zona reticularis.

c) Diagrammatically describe the molecular mechanism of muscle contraction with special mention of Ca^{2+} , troponin and tropomyosin.

3+2
