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UG/3rd Sem/ZOO(H)/T/19

2019

B.Sc.

3rd Semester Examination

ZOOLOGY (Honours)

Paper - C 6-T

(ANIMAL PHYSIOLOGY : CONTROLLING AND COORDINATING SYSTEM)

Full Marks : 40 Time : 2 Hours

The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable.

Group - A

1. Answer *five* questions from the following : 5×2=10

   (a) What is meant by neuromodulation ?

   (b) Why is cartilage is slow to heal ?

   (c) Where from chorionic gonadotropin is secreted? Mention its biological importance. 1+1

   (d) Write down the function of Cowper's gland.

[Turn Over]

(e) What is menarche ?

(f) What do you mean by reflex action ?

(g) What is Frohlich's syndrome ?

(h) What is Grave's disease ?

Group - B

2. Answer *four* questions : 4×5=20

(a) In what ways do intramembranous and endocardial ossification differ ?

(b) (i) State the difference between spermatogenesis and spermiogenesis. 3

(ii) Write down the role of hormone in sperm production. 2

(c) Write down the function of Osteoblast and Osteoclast cells. 4

State the origin of Osteoblast cell. 1

(d) Draw a sarcomere and label its components. Briefly state the function of each component.

(e) Explain how intracellular free Ca^{2+} is regulated in striated muscle fibers and how does it control their contraction ?

(f) What are the four important hormones and their respective functions in the female menstrual cycle?

Group - C

3. Answer any *one* question : 1×10=10

(a) (i) Explain the role of different channel proteins in maintainance of resting membrane potential.

(ii) Briefly explain synaptic transmission in neural signalling.

(b) (i) Illustrate diagramatically the role of insulin hormone signalling in response to high blood sugar condition.

(ii) Compare the signal transduction pathway between protein, thyroid and steroidal hormone.
