



'সমানো মন্ত্র: সমিতি: সমানী'

UNIVERSITY OF NORTH BENGAL

B.Sc. Honours 3rd Semester Examination, 2022

CC6-ZOOLOGY

ANIMAL PHYSIOLOGY: CONTROLLING AND COORDINATING SYSTEM

Time Allotted: 2 Hours

Full Marks: 40

The figures in the margin indicate full marks.

1. Answer any **five** questions from the following: 1×5 = 5
 - (a) Define resting membrane potential.
 - (b) Write the function of Sertoli cells.
 - (c) What is meant by reflex action?
 - (d) Give an example of eicosanoid hormone.
 - (e) Name the longest and smallest bone of the human body.
 - (f) Define autocrine signal.
 - (g) Name the smallest endocrine gland.
 - (h) Write the function of osteoblast.

2. Answer any **three** questions from the following: 5×3 = 15
 - (a) Write down the functions of thyroid hormones. Add a note on exophthalmic goitre. 3+2
 - (b) Describe the structure of a neuron. Mention its function. 3+2
 - (c) Mention differences between an electrical and a chemical synapse.
 - (d) Describe the histological architecture of Mammalian testis. Mention the hormone(s) secreted from this gland. 4+1
 - (e) Write the differences between cartilage and bone along with similarities between them.

3. Answer any **two** questions from the following: 10×2 = 20
 - (a) What is saltatory movement? Discuss the role of calcium in muscle contraction? Describe briefly about ultrastructure of skeletal muscle. 1+3+6
 - (b) Describe the histological structure of adrenal gland with diagram. Discuss functions of any one hormone secreted from it. 6+4
 - (c) Describe the origin of action potential and its propagation in a non-myelinated nerve fibre using suitable diagram. 5+5
 - (d) Classify epithelial tissue on the basis of cell shape and number of cell layers with proper diagram mentioning their distribution and function. Differentiate between mesothelium and endothelium. (4+2+2)+2

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