

Unique Paper Code : 32231302 _OC

Name of the Paper : Physiology – Controlling and Coordinating Systems

Name of the Course : B.Sc. (H) Zoology Examination, 2020-CBCS

Semester : III

Duration : 03 hours

Maximum Marks : 75 Marks

Instructions for Candidates:

Write your Course, Semester, Roll No., Paper Name, UPC, and Page No. on all the answer sheets used by you.

Attempt **four** questions. Each question carries equal marks. Draw relevant diagrams wherever required.

Q.1 Draw well-labeled histological diagrams of spongy and compact bone. Explain in what ways is their structural makeup well-suited to their respective functions? Add a note on the endocrine regulation of calcium levels in the body (18.75)

Q.2 Illustrate diagrammatically the architecture of a muscle fiber Describe the sequence of steps taking place during its contraction, with the help of well-labeled diagrams (18.75)

Q.3 A person exhibits the symptoms of Polyphagia, Polydipsia, and Polyuria. What disease could he be suffering from? What could it be due to? Draw a well-labeled histological diagram of the organ referred to in this pathological condition and its physiology. (18.75)

Q.4. A person has a disease that inhibits the production of cholinesterase, what kind of symptoms would that person show? Explain the sequence of events that take place at the neuromuscular junction and the role played by acetylcholine during the process. (18.75)

Q.5 Illustrate diagrammatically the structural differences between the various types of cell junctions in relation to their function. Also emphasize on the characteristic feature/s of cardiac muscle fibres which enables the heart to contract as a whole (18.75)

Q.6 . Draw the well-labeled histological diagram of ovary. Describe the phases of ovarian cycle and relate them to events of oogenesis. Explain the role of hormones in the regulation of

the ovarian and uterine cycles in human females (18.75)

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