B.Sc. Semester-VI Examination, 2022-23

ZOOLOGY [Honours]

Course ID : 62617 Course Code : SH/ZOO/604/DSE-4

Course Title : Endocrinology

Time : 1 Hour 15 Minutes Full Marks : 25

The figures in the right-hand margin indicate marks.

Candidates are required to give their answers in their own words as far as practicable.

UNIT-I

1. Answer any **five** of the following questions: 1×5=5

   a) Differentiate between neurohormone and neurosecretion.

   b) Hormones receptors enable specific cell to receive hormones for cellular functions. Name the receptor types involved and write down their location in cells.

   c) Vasopressin controls the production of urine and stimulates contraction of arterioles. Oxytocin functions in the contraction of the uterus during parturition and ejection of milk by the mammary glands during suckling. Mention the sites of production of these hormones and their chemical nature.

   d) How are the hormones of hypothalamus got transported to the hypophysis?

   e) What is the ultimate effect of rennin-angiotensin-aldosterone system?

   f) Parathyroid hormone along with $1,25(OH)_2D_3$ through separate actions lead to the production of Cytokines from osteoblasts. How are these paracrine cytokines act on the development of skeletal elements?

   g) Write down the full form of ELISA and RIA.

   h) Why Testis is called heterocrine gland?

UNIT-II

2. Answer any **two** from the following questions: 5×2=10

   a) Describe the process of iodine transport into thyroid follicles and the biosynthesis of thyroid hormones.What do you mean by hyperthyroidism and hypothyroidism? 3+2

   b) Draw a schematic diagram of Parathyroid and Pineal glands. Write down the name of the hormones secreted by these glands and their functions. 3+1+1

   c) What do you mean by homoeostasis? Describe the roles of hormones in homoeostasis. 1+4

d) Classify different hormones according to their chemical nature and give example of each type. What is Feedback mechanism of hormonal regulation? 3+2=5

UNIT-III

3. Answer any **one** from the following questions: 10×1=10

a) Describe menstrual cycle in human with diagrammatic configuration and secretion of hormones during the cyclic phases. 7+3=10

b) What are cell surface receptors? Briefly describe the signaling pathway of glucagon hormone by a cell surface receptor to regulate blood glucose level. 2+8=l0

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