2022

ZOOLOGY — HONOURS

Paper : CC-6

Full Marks : 50

The figures in the margin indicate full marks.

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

Answer ***any ten*** questions.

1. Describe any three types of cartilages with proper diagram. 3+2

2. Describe neuromuscular junction with suitable diagram. 3+2

3. Draw and describe the mechanism of impulse propagation through chemical synapse. 2+3

4. Give a brief account of the role of actin and myosin in muscular contraction with suitable diagram. 3+2

5. Write short notes on the following (***any two***) : 2½×2
   (a) Electrical synapse
   (b) Areolar tissue
   (c) Haversian system
   (d) Red and white muscle fibre.

6. (a) Describe the role of $Na^+ - K^+$ ATPase pump in impulse propagation.
   (b) Write two important differences between collagen fibre and elastic fibre. 3+2

7. State the process of iodine uptake and storage in thyroid gland with a schematic diagram. 2½+2½

8. Describe the histological structure of anterior pituitary gland and mention the names of hormones released by each cell type. 3+2

9. Give a brief account of signal transduction pathway of any one non-steroidal hormone. 5

10. Mention the names of different placental hormones and state their functions. 2+3

11. Describe the role of estrogen and progesterone in maintaining menstrual cycle. 2½+2½

12. Distinguish between (***any two***) : 2½×2

(a) Steroid and non-steroid hormone

(b) Estrous and menstrual cycle

(c) Bone and cartilage.

13. Classify epithelial tissue according to shape of the cells with example. 5

14. Compare the three cortical zones of adrenal gland with reference to structural and functional aspects. 5

15. (a) Mention the location and function of Leydig cells and Sertoli cells.

(b) What is primary ossification centre? (½+1)×2+2