

SECOND SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2023
(Regular/Improvement/Supplementary)

ZOOLOGY

FZOL2C06: DEVELOPMENTAL BIOLOGY & ENDOCRINOLOGY

Time: 3 Hours

Maximum Weightage: 30

Part A: Answer any *four* questions. Each carries 2 weightage.

1. Give an account on induction and competence.
2. What is Addisons disease?
3. Explain heterochrony and heterometry.
4. What is JAK-STAT pathway?
5. Explain Hoxcode hypothesis.
6. Elucidate the role of kidney as an endocrine organ.
7. What is transdifferentiation?

(4 × 2 = 8 weightage)

Part B: Answer any *four* questions. Each carries 3 weightage.

8. Explain briefly environmental sex determination.
9. Give an account on teratogenic agents.
10. Explain briefly dorso-ventral patterning in *Drosophila melanogaster*.
11. Discuss the physiological roles of androgens.
12. Write notes on differential gene transcription.
13. Give an account on hormonal regulation of parturition and lactation.
14. Explain general classes of chemical messengers.

(4 × 3 = 12 weightage)

Part C: Answer any *two* questions. Each carries 5 weightage.

15. Explain regeneration, types and histological processes.
16. Discuss the types of hormone receptors. Describe the regulation of receptor number and receptor activation.
17. Give an account on hypothalamus and hypophysis. Explain the role of hypothalamus in regulating the function of hypophysis.
18. Explain differentiation of neural crest cells.

(2 × 5 = 10 weightage)