

SECOND SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2024

(Regular/Improvement/Supplementary)

ZOOLOGY

FZOL2C06: DEVELOPMENTAL BIOLOGY & ENDOCRINOLOGY

Time: 3 Hours

Maximum Weightage: 30

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

1. Stem cell potency.
2. Segmentation genes.
3. Steroid receptors.
4. Hormone action of Eicosanoids.
5. Differential cell affinity.
6. Neurotransmitters.
7. Testicular dysgenesis syndrome.

(4 × 2 = 8 weightage)**Part B: Answer any *four* questions. Each carries 3 weightage.***Write short essays on:*

8. Polyspermy.
9. Ageing and insulin signal cascade.
10. Hormonal regulation of female monthly rhythm.
11. Differentiation of neural crest cells.
12. Hormonal factors in parturition.
13. Types of polyphenism.
14. Brain hormones and behavior.

(4 × 3 = 12 weightage)**Part C: Answer any *two* questions. Each carries 5 weightage.**

15. Discuss any five signal transduction cascades.
16. Explain limb development in chick.
17. Write notes on structure, functions and control of hormonal secretion in adrenal gland.
18. Explain the cell surface molecules in sperm egg recognition in sea urchin and mammals.

(2 × 5 = 10 weightage)