

SECOND SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2021
ZOOLOGY
FZOL2C06: DEVELOPMENTAL BIOLOGY & ENDOCRINOLOGY

Time: 3 Hours

Maximum Weightage: 30

Part A: All questions can be answered. Each carries *two* weightage (Ceiling 6 weightage).

1. Describe the cellular interactions concerned in fertilization.
2. Explain hormonal control of insect metamorphosis.
3. Outline the histological process during regeneration.
4. State Hox-code hypothesis.
5. Enlist the functions of aldosterone.
6. Describe the physiological roles of endorphin.
7. Explain the role of gases as neural messengers.

Part B: All questions can be answered. Each carries *four* weightage (Ceiling 12 weightage).

8. Discuss the causes of ageing.
9. Illustrate the mechanism of axis formation in amphibians.
10. Explain the cell signaling mechanism.
11. Describe post translational regulation of gene expression in detail.
12. Explain the second messengers of hormone action.
13. Elaborate the anatomy and functions of parathyroid gland.
14. Write on hormonal factors in parturition and lactation.

Part C: All questions can be answered. Each carries *six* weightage (Ceiling 12 weightage).

15. Discuss the role of genes in anterior- posterior patterning of *Drosophila*.
16. What is teratogenesis? Describe the effects of different teratogenic agents.
17. Write an essay on the mechanism of fertilization.
18. Describe the anatomy of thyroid gland and the synthesis and physiological functions of thyroid hormones.