

D2AZL1903 (S1)

Name.....

Reg.No.....

SECOND SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2021

(Improvement/Supplementary/Special)

ZOOLOGY

FZOL2C06: DEVELOPMENTAL BIOLOGY & ENDOCRINOLOGY

Time: 3 Hours

Maximum Weightage: 30

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

1. Write the importance of embryonic stem cells.
2. Briefly mention the importance of embryonic fields.
3. Differentiate between *Leydig* and *Sertoli* cells.
4. Mention the significance of cadherins in differentiation.
5. Distinguish epimorphosis from morphallaxis.
6. Briefly mention the neurotransmitters and its importance.
7. Comment on the physiological roles of oxytocin.

(4 × 2 = 8 Weightage)

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

8. Describe the cell surface molecules in sperm egg recognition.
9. Explain anterior-posterior patterning in *Drosophila*.
10. Describe the differentiation of neural crest cells.
11. Describe the mechanism of regulation of thyroxine production.
12. Explain the synthesis and functions of glucocorticoids.
13. Explain how hormones control menstrual cycle.
14. Describe the hormonal regulation of lactation.

(4 × 3 = 12 Weightage)

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

15. Discuss the various teratogens and evaluate their role in causing congenital malformations.
16. Discuss the mechanisms of axis formation and embryonic induction in amphibians.
17. Write an essay on the biology of senescence. Add a note on genetically programmed ageing.
18. Describe the hormone receptors and explain the mechanism of hormonal action.

(2 × 5 = 10 Weightage)