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25BZO202

UG PROGRAM (4 YEARS HONOURS) WITH SINGLE MAJOR
AT THE END OF SECOND SEMESTER

ZOOLOGY - EMBRYOLOGY (B.Sc. HONOURS-MAJOR)

(w.e.f. Admitted Batch 2025-26)

Time: 3 Hours

Max. Marks: 70

SECTION - A

Answer any Five questions. Each question carries 4 marks.

(5x4=20)

1. Asymmetric cell division
2. Blastulac
3. Mesoderm
4. Epimorphosis
5. Gastrulation in chick
6. Spermatogenesis
7. Genetic Clock Theory of Ageing
8. Neurulation

SECTION - B

Answer All questions. Each question carries 10 marks.

(5x10=50)

9. (a) Detail the mechanisms of cell-cell interaction and pattern formation during embryogenesis.
(Or)
(b) Comment on Differential gene expression.
10. (a) Explain briefly the different types of eggs.
(Or)
(b) Trace the early development of a frog embryo upto gastrulation.
11. (a) Explain the structure and physiological functions of extra-embryonic membranes in amniotes.
(Or)
(b) What is amniocentesis? Detail its procedure, applications, and ethical considerations.
12. (a) Elaborate on the hormonal regulation in amphibians.
(Or)
(b) Define teratogens and analyze their effect on embryonic development.
13. (a) Describe the step-by-step organogenesis of the human skin.
(Or)
(b) Discuss the comparative significance of studying the developmental stages of frog and mammal to understand vertebrate evolution.