

2024
B.A./B.Sc.
Sixth Semester
CORE – 13
ZOOLOGY
Course Code: ZOC 6.11
(Developmental Biology)

Total Mark: 70
Time: 3 hours

Pass Mark: 28

Answer five questions, taking one from each unit.

UNIT-I

1. Elaborate on the cell differentiation and cell growth. 7+7=14
2. Write notes on the following: 7×2=14
 - (a) Cytoplasmic determinants
 - (b) Differential gene expression

UNIT-II

3. Explain the process of spermatogenesis with a schematic chart. Add a note on types of eggs. 10+4=14
4. Explain the following: 7×2=14
 - (a) Patterns of cleavage
 - (b) Fate maps

UNIT-III

5. Explain in detail the process of implantations of embryo in humans. 14
6. Write notes on the following: 7×2=14
 - (a) General structure of placenta
 - (b) Functions of extra-embryonic membranes in birds

UNIT-IV

7. Discuss the different changes in metamorphosis. Add a note on compensatory regeneration. 10+4=14
8. Write notes on the following: 7×2=14
- (a) Cellular and systemic theory of ageing
 - (b) Epimorphosis regeneration with example

UNIT-V

9. Explain the different teratogenic agents and their effects on embryonic development. 7+7=14
10. Write notes on the following: 7×2=14
- (a) Stem cell
 - (b) Amniocentesis
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