

**2023**  
**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. Give an account on the different phases of embryonic development. 14
2. Write notes on the following: 7×2=14
  - (a) Asymmetric cell division
  - (b) Cell-cell interaction

**UNIT-II**

3. Explain in detail the mechanism of fertilization. 14
4. Write notes on the following: 7×2=14
  - (a) Egg membranes
  - (b) Types of blastula with diagrams

**UNIT-III**

5. Explain the structure of extra-embryonic membranes of chick with a diagram and add a note on their functions. 10+4=14
6. Write notes on the following: 7×2=14
  - (a) Fate of germ layers
  - (b) Types of placentae

**UNIT-IV**

7. Explain the different types of regeneration giving examples. 14

8. Discuss the hormonal regulations of metamorphosis in amphibians and insects. Add a note on aging. 10+4=14

### UNIT-V

9. Define teratogenesis. Discuss this phenomenon in relation to embryonic development. 2+12=14
10. Write notes on the following: 7×2=14
- (a) Embryonic stem cell
  - (b) In vitro fertilization
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