

**April 2025**  
**B.A./B.Sc.**  
**Sixth Semester**  
**CORE – 13**  
**ZOOLOGY**  
*Course Code: ZOC 6.11*  
(Developmental Biology)

Total Mark: 70

Pass Mark: 28

Time: 3 hours

Answer five questions, taking one from each unit.

**UNIT-I**

1. Explain in detail the historical perspective and basic concepts of developmental biology. 7+7=14
2. Write notes on the following: 7×2=14
  - (a) Phases of development
  - (b) Asymmetric cell division

**UNIT-II**

3. Give a detailed account on the mechanism of fertilization. Add a note on egg membranes. 10+4=14
4. Write notes on the following: 7×2=14
  - (a) Blocks to polyspermy
  - (b) Early development of chick up to gastrulation

**UNIT-III**

5. Write an account on the extra-embryonic membranes in birds. Add a note on fate of germ layers. 10+4=14
6. Explain the different types of placentas and its functions. 10+4=14

**UNIT-IV**

7. Give a comparative account on the hormonal regulations in amphibians and insects. 7+7=14

8. Write notes on the following: 7×2=14  
(a) Morphallaxis regeneration with example  
(b) Concepts of ageing

### UNIT-V

9. What is in vitro fertilisation (IVF)? Explain in detail the steps involved in IVF. 2+12=14
10. Write notes on the following: 7×2=14  
(a) Embryonic stem cells  
(b) Teratogenic agents
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