

**2021**  
**M.Sc.**  
**First Semester**  
**CORE – 04**  
**ZOOLOGY**  
*Course Code: MZOC 1.41*  
(Developmental Biology)

*Total Mark: 70*

*Pass Mark: 28*

*Time: 3 hours*

*Answer five questions, taking one from each unit.*

**UNIT-I**

1. Discuss the cell fate and its mechanism of developmental commitment. 14
2. Explain the concept of organizer-induction and competence. 14

**UNIT-II**

3. Write a note on sperm development in male. 14
4. Write notes on:
  - (i) Characteristics of cleavages 7
  - (ii) Gastrulation and the three germ layers 7

**UNIT-III**

5. Describe the axis pattern formation in chick with representative diagrams. 14
6. Write notes on:
  - (i) Development of brain in vertebrate 7
  - (ii) Morphallactic regeneration in hydra 7

**UNIT-IV**

7. Explain the estrous and menstrual cycle in female with neat labeled diagrams. 14
8. Write notes on:
  - (i) Adolescence and puberty 7
  - (ii) Role of hormones 7

## UNIT-V

9. Explain the different contraceptive methods for both male and female. 14
10. Write notes on:
- (i) Teratogenesis and its agents 7
  - (ii) Pregnancy 7
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