

CS/2110

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Semester V
ZOOLOGY

5240/NH

Paper: I: Developmental Biology (ZOO 301)

Time Allowed: Three Hours

Maximum Marks: 40

Note: Attempt five questions in all. Question No. 9 in section C is compulsory. Select two questions from Section A & B. Draw diagrams wherever necessary.

Section A

1. What is Gametogenesis? Discuss with special reference to differentiation of spermatozoa. 6
2. Write short notes on
 - (a) Polarity of egg
 - (b) Give an account of vitellogenesis 3+3
3. Define Parthenogenesis. Discuss its types and write its significance. 6
4. a) How polyspermy is prevented in animals.
- b) Describe different cleavage patterns. 3+3

Section B

5. Describe Fate maps of Chick embryo. 6
6. Write an account on the development of Frog up to three germ layers. 6
7. (a) What is Placenta.
- (b) Explain different types of Placenta with regard to the intimacy between the foetal and maternal part of placenta. 2+4
8. Write short notes on
 - (a) Metamorphosis in frog
 - (b) Role of Foetal Membranes 3+3

Section C

9. Explain the following briefly:
 - i. Secondary Egg Membranes
 - ii. Oogenesis
 - iii. Gastrula
 - iv. Fertilization
 - v. Organizers
 - vi. Inducers
 - vii. Indeterminate cleavage
 - viii. Tadpole of Herdmania

8x2 = 16