

ZOOLOGY Paper-I (ZOO-501)

(Developmental Biology)

Time Allowed : 3 Hours

Maximum Marks : 36

Note : Attempt five questions in all. Question No. 1 is compulsory. Select one question from each Unit. Draw diagrams wherever necessary.

1. Explain the following briefly :

- (i) Acrosome reaction
- (ii) Parthenogenesis
- (iii) Mesolecithal eggs
- (iv) Sperm Capacitation
- (v) Inducers
- (vi) Radial Cleavage
- (vii) Placenta
- (viii) Metamorphosis

8×1=8

UNIT-I

2. Describe spermatogenesis and discuss major events that occur during spermiogenesis. 7

3. Write notes on the following :

- (i) Egg Maturation
- (ii) Polarity of egg

3+4=7

UNIT-II

4. Explain different types of cleavage regarding the amount and distribution of yolk. 7

5. (a) What is Blastula ? Describe different types of Blastula.

(b) Fate map of chick emryo.

4+3=7

UNIT-III

6. Discuss basic concepts of Organizers and inducers and their role. 7

7. Write an account on the development of Chick upto three germ layers. 7

UNIT-IV

8. Discuss foetal membranes, their formation and role. 7

9. Describe the Metamorphosis of tadpole in Herdmania. 7