

5556054

Seat No. \_\_\_\_\_

**M. Sc. (Part - II) Examination**

April / May – 2003

**Zoology : Paper - IV**

*(Development Biology, Animal Behaviour & Evolution)*

Time : 3 Hours]

[Total Marks : 100

**NB: All questions carry equal marks.  
All questions are compulsory.  
Illustrate your answers with neat diagrams wherever necessary**

1. Describe: a). Cleavage patterns  
b). Gradients in Development of the embryo

**OR**

1. Describe: a). Selective action of genes during development  
b). Epithelial – mesenchymal interaction in development
2. Describe: a). Gastrulation  
b). Behavioural components and equipments

**OR**

2. Write an account on: a). Cell interactions with reference to organogenesis of eye  
b). Forms of Territoriality
3. Give an account of: a). Social life of Baboon  
b). Communication in bats and moths

**OR**

3. Describe: a). Individual behavioural patterns with suitable examples  
b). Reproductive behavioural patterns
4. Give an account of: a). Chromosomal mutations  
b). Forces in evolution

**OR**

4. Give an account of: a). Recent theories on Origin of life  
b). Role of Mimicry in evolution
5. Write short notes on **Any three** of the following:

- a). Types of growth
- b). Amphibian fate maps
- c). Dances in Bees
- d). Proximate and Ultimate causations
- e). Molecular phylogeny
- f). Embryonic induction

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[150]