

**N-55040**

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

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

April / May – 2003

**Life Science : Paper-III**

*(Animal Systems, Evolution, Development Biology & Ecology)*

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). Cardiac cycle  
b). Synaptic transmission

**OR**

1. Describe: a). Exchange of gases  
b). Physiology of muscle contraction
2. Write notes on: a). Patterns of evolution  
b). Chromosomal mutations

**OR**

2. Write notes on: a). Ploidy in evolution  
b). Genetic Drift
3. Give an account of: a). Morphogenetic movements  
b). Organogenesis of brain

**OR**

3. Give an account of: a). Cleavage patterns  
b). Parthenogenesis
4. Write notes on: a). Estuarine ecosystem  
b). Energy flow in ecosystem

**OR**

4. Write notes on: a). Population growth  
b). Phosphate cycle
5. Write short notes on **Any three** of the following:
  - a). Glomerular ultrafiltration
  - b). Digestion and absorption of lipids
  - c). Gastrulation in frog
  - d). RNA world hypothesis
  - e). Speciation
  - f). Niche theory

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