N-55040  
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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