

# ZOOLOGY PAPER-A

## Cell Biology (Zoo-101)

Time Allowed : Three Hours

Maximum Marks : 36

Note : Attempt one questions each from Units-I-IV. Questions No.1 is compulsory.

1. Write short answers :

- Difference between simple and compound microscope
- Primary and secondary hosts of *Plasmodium*
- Type of spicules in *Sycon*
- Types of zooids in *Obelia*
- Differentiate between endocytosis and exocytosis
- Name two common fixatives
- Prosopyle and apopyle
- Differences in inner and outer mitochondrial membrane.  $8 \times 1 = 8$

### UNIT-I

- Describe the process of conjugation in *Paramecium*. 7
- (a) Write an ecological note and economic importance of *Trypanosoma*  $3\frac{1}{2}$   
(b) Show diagrammatically the life cycle of *Plasmodium*.  $3\frac{1}{2}$

### UNIT-II

- Describe the life cycle of *Obelia*. 7
- (a) Give an ecological account and economic importance of *Tubularia* and *Spongilla*.  $3\frac{1}{2}$   
(b) Give an account of structure and functions of various cells found in *Sycon*.  $3\frac{1}{2}$

### UNIT-III

- Give principle and applications of SEM and give differences between SEM and TEM. 7
- Explain the mechanism of active transport across membrane. 7

### UNIT-IV

- Give a detailed account of functions of Golgi complex. 7
- (a) Explain role of mitochondria in respiration  $3\frac{1}{2}$   
(b) Name enzymes associated with ER.  $3\frac{1}{2}$