

2012
B.A./B.Sc. (General) First Semester
Zoology

Paper - I (ZOO-101): Biodiversity and Cell Biology - I

Time allowed: 3 Hours

Max. Marks: 36

NOTE: Attempt five questions in all, including Question No. I which is compulsory and selecting one question from each Unit.

x-x-x

I. Explain briefly:-

- a) Nuclear stains
- b) Mitochondrial DNA
- c) Kappa particles
- d) Spongin fibres
- e) Nematocysts
- f) Electron microscopy
- g) Osmoregulation in Paramecium
- h) Amoebiasis

(8x1)

UNIT - I

II. a) Discuss the life cycle of *Plasmodium*.

b) How does *Amoeba* tide over unfavourable conditions? (5,2)

III. Describe the ecology & economic importance of *Trypanosoma* and *Giardia*. (7)

UNIT - II

IV. Explain 'Alternation of Generations' with reference to Coelentrates (Cnidaria). (7)

V. Write notes on:-

a) Canal system in *Scypha*

b) Corals & coral reef formation (4+3)

UNIT - III

VI. a) What are chemical & physical fixatives?

b) Discuss the principle and applications of light microscopy. (4+3)

VII. a) Discuss the structure of Plasma Membrane.

b) Explain the nuclear organization of the eukaryotic cell. (4+3)

P.T.O.

(2)

UNIT - IV

VIII. Discuss the structure, types and function of Endoplasmic Reticulum. (7)

IX. Write notes on:-

a) Mitochondrial enzymes

b) Functions of Golgi Complex (4+3)

x-x-x