

CELL BIOLOGY AND BIODIVERSITY - I(A)

(Re-Appear April 2012)

Time : Three Hours

Maximum Marks : 75

Note : Attempt one question each from Section A, B, C and D carrying 15 marks each, and the entire Section E consisting of ten short answer type questions carrying 1½ marks each.

Section-A

- Write notes on the following :
 - Uses of Fixation.
 - Mitochondrial DNA.
 - Centrosome.
- Explain the ultrastructure of Nucleus. Give its functions.
 - Write short notes on Osmosis.

Section-B

- Write notes on the following :
 - Erythrocytic schizogony in Malarial parasite.
 - Draw Medusa of Obelia (ventral view).
 - Locomotion in Amoeba.
- Briefly describe the following :
 - Canal system in Sycon.
 - Autogamy in Paramecium.

Section-C

- Describe the Reproductive system of Earthworm. 15
- Give an account of the life history of Taenia. 15

Section-D

- Classify upto order with brief ecological note and economic importance of the following :
 - Entamoeba.
 - Physalia.
 - Echinococcus.
 - Oxyuris.
 - Tubifex
- Write salient features of Phylum
 - Coelenterata.
 - Platyhelminthes.

Section-E

- Explain the following in brief :
 - Why Lysosomes are called Suicidal bags ?
 - Give the types of chromosomes on the basis of relative position of centromere.
 - What are Biomembranes ?
 - Write a note on Setae of Earthworm.
 - Differentiate between 'Alternation of generation' and 'Metagenesis'.
 - Write a note on Kappa particles.
 - Give the functions of Vitelline gland and Mehlis' gland.
 - Write a note on Cercaria Larva.
 - What is Elephantiasis ?
 - Give the difference between True coelom and Pseudocoelom.