

SYLLABUS

Life and Diversity from Coelentrata to Helminths & Cell Biology – II

External Marks: 40

**Internal Assessment : 10
Hours**

Time allotted : 3

Note :

1. Nine questions are to be set in all and the candidate are required to attempt five questions including compulsory question.
2. Question 1 is compulsory consisting of 10 parts (1.0 marks each) converting the entire syllabus. Answer to each part should not exceed 20 words.
3. Out of remaining eight, four questions are to be set from each section A & B, possibly splitting them in parts. Candidate is required to attempt four questions, two from each section

1. Phylum – Coelentrata :

- i) General characters and classification up to order level
- ii) Biodiversity, economic importance
- iii) Type Study - *Obelia*
- iv) Corals and coral reefs
- v) Polymorphism in Siphonophores

2. Phylum – Helminths :

- i) General characters and classification up to order level
- ii) Biodiversity, economic importance
- iii) Type study – *Fasciola hepatica*;
- iv) Helminths parasites : Brief account of life history, mode of infection and pathogenesis of *Schistosoma*, *Ancylostoma*, *Trichinella*, *Wuchereria* and *Oxyuris*.

1. Ultrastructure and functions of Nucleus : Nuclear membrane, nuclear lamina, nucleolus, fine structure of chromosomes, nucleosome concept and role of histones, euchromatin and heterochromatin, lampbrush chromosomes and polytene chromosomes.
2. Mitosis and Meiosis (Cell reproduction)

3. Brief account of causes of cancer.
An elementary idea of cellular basis of Immunity.