

IAS Mains Botany 2000

Paper-II

Section A

1. Answer any three of the following. Each part should be answered in not more than 200 words
 - a. Biological membranes
 - b. Bacterial photosynthesis
 - c. Prosthetic groups of different enzymes in respiratory chain
 - d. Test of significance
2. Give a diagrammatic representation of the structure and functions of organelles in eukaryotic cells.
3. Write notes on the following
 - a. Heterosis
 - b. Molecular basis of sex determination
 - c. Quantitative inheritance
4. Give a brief account of hybridization work on India crop plants.

Section B

5. Answer any three of the following. Each part should be answered in not more than 200 words
 - a. Enzyme repression and induction
 - b. Buffers
 - c. B-Chromosomes
 - d. Global warming
6. Give evidences in support of organic evolution. Discuss its mechanism and theories in brief.
7. Discuss the effect of cement dust pollution on the broad leaved species of forest trees.
8. Write detailed notes on the following
 - a. Endangered plant species
 - b. Endemic plants
 - c. Role of mycorrhiza in tree nutrition