

BOTANY (Paper I)

Time Allowed : Three Hours

Maximum Marks : 300

QUESTION PAPER SPECIFIC INSTRUCTIONS

(Please read each of the following instructions carefully before attempting questions)

There are EIGHT questions divided in two Sections.

Candidate has to attempt FIVE questions in all.

Question Nos. 1 and 5 are compulsory and out of the remaining, any THREE are to be attempted choosing at least ONE question from each Section.

All questions carry equal marks.

Wherever any assumptions are made for answering a question, they must be clearly indicated.

Word limit in questions, wherever specified, should be adhered to.

SECTION 'A'

1. Answer any three of the following in not more than 200 words each
 - (a) Describe the sexual reproduction in Equisetum.
 - (b) Write the different types of genetic recombination found in bacteria.
 - (c) With the help of suitable diagram describe the saprophyte of Funaria.
 - (d) Describe the life cycle of Penicillium.
2. Give the causal organism, symptoms and control measures of the following
 - (a) Peach leaf curl
 - (b) Tikka disease of groundnut
 - (c) Little leaf of brinjal
3. Describe the life cycle of Polysiphonia in detail.
4. Write notes on
 - (a) Fungal toxins
 - (b) Methods of producing somatic hybrids and their application

SECTION 'B'

5. Answer any three of the following in not more than 200 words each
 - (a) Anomalous secondary growth in monocot stem
 - (b) Applications of palynology
 - (c) Polyembryony
 - (d) Different kinds of female gametophyte found in angiosperms
6. Write an account of the floral structure of the following families (i) Poaceae (ii) Asclepiadaceae (iii) Brassicaceae Give botanical names of three important plant species belonging to each of the three families and specify their uses.
7. Describe the development of male gametophyte in Pinus. Discuss the economic importance of this genus.
8. (a) Mention the botanical names and families of ten important drug yielding plants, source from plant parts and the uses of these drugs in human welfare.

- (b)** Discuss the importance of ethnobotany in India.