

8. Write short notes on any **six** of the following :

- (a) Engler and Prantl
- (b) Cybrids
- (c) Green ear disease
- (d) Citrus canker
- (e) Slime molds
- (f) Penicillium
- (g) Cyanobacteria
- (h) Heterospory
- (i) Psilotum
- (j) Rhizobium.

6×10=60

Roll No.

Total No. of Pages : 4

1(CCE.M)3

Botany-I

(04)

Time : Three Hours]

[Maximum Marks : 300

INSTRUCTIONS

- (i) Answers must be written in English.
- (ii) The number of marks carried by each question is indicated at the end of the question.
- (iii) The answer to each question or part thereof should begin on a fresh page.
- (iv) Your answer should be precise and coherent.
- (v) The part/parts of the same question must be answered together and should not be interposed between answers to other questions.
- (vi) Candidates should attempt question numbers **1** and **5** which are compulsory and any **three** more out of the remaining questions selecting at least **one** question from each Section.
- (vii) If you encounter any typographical error, please read it as it appears in the text-book.
- (viii) Candidates are in their own interest advised to go through the General Instructions on the back side of the title page of the Answer Script for strict adherence.
- (ix) No continuation sheets shall be provided to any candidate under any circumstances.

- (x) Candidates shall put a cross (x) on blank pages of Answer Script.
- (xi) No blank page be left in between answers to various questions.
- (xii) No programmable Calculator is allowed.
- (xiii) No stencil (with different markings) is allowed.

SECTION–A

1. Write notes on any **six** of the following :
 - (a) Soil microbe
 - (b) Biocides
 - (c) Smuts
 - (d) Cyanophages
 - (e) Palynology
 - (f) Single cell culture
 - (g) Nucellus
 - (h) Azolla. 6×10=60
2. (a) Describe the structure and methods of reproduction in Bacteria.
 (b) Give a detailed account of plant viral diseases.
 (c) Discuss the structure and role of 'B' cells and 'T' cells in immune responses and in the production of Antibodies. 3×20=60
3. (a) Discuss the role played by Fungi in Agriculture, Industry and Medicine.
 (b) Give a detailed account of Stellar evolution in Pteridophytes.
 (c) Describe the use of Algae as food, medicine and as bioindicators. 3×20=60

4. (a) Describe the life history of Gnetum and mention the features in which it approaches the Angiosperms.
 (b) Explain the monocot and dicot seed structure.
 (c) Give an account of Modern trends in Biosystematics. 3×20=60

SECTION–B

5. Write short notes on any **six** of the following :
 - (a) Morphogenesis
 - (b) Floral morphology of a grass
 - (c) Corolloid roots
 - (d) Double fertilization
 - (e) Resupination
 - (f) Elaters
 - (g) Mycoplasma
 - (h) Sporocarp. 6×10=60
6. (a) Explain the inflorescence in Euphorbiaceae and tendrils, fruits of cucurbitaceae.
 (b) Give a comparative account of the families Rubiaceae and Rosaceae.
 (c) Describe the storage organs in Cruciferae and Liliaceae. 3×20=60
7. (a) Describe the methods for isolation and purification of protoplasts.
 (b) Discuss the role of tissue culture in crop improvement.
 (c) What is Somaclonal variation ? What is its significance in plant tissue culture ? 3×20=60