(a) Engler and Prantl

Write short notes on any six of the following :

(d) Citrus canker

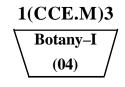
(b) Cybrids

8.

- (e) Slime molds
- (f) Penicillium
- (g) Cyanobacteria
- (h) Heterospory
- (i) Psilotum
- (j) Rhizobium.

6×10=60

Roll No.



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.

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- (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. $3\times 20=60$
- (a) Discuss the role played by Fungi in Agriculture, Industry and Medicine.
 - (b) Give a detailed account of Stelar evolution in Pteridophytes.
 - (c) Describe the use of Algae as food, medicine and as bioindicators. $3\times 20=60$

- 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

(h)

- (g) Mycoplasma
 - Sporocarp. 6×10=60
- 6. (a) Explain the inflorescence in Euphorbiaceae and tendril, fruits of cucurbitaceae.
 - (b) Give a comparative account of the families Rubiaceae and Rosaceae.
 - (c) Describe the storage organs in Cruciferae and Liliaceae. $3\times 20=60$
- 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

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