

4 SEM TDC BOTH (CBCS) C 10

2023

(May/June)

BOTANY

(Core)

Paper : C-10

(Plant Systematics)

Full Marks : 53

Pass Marks : 21

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

1. (a) Choose the correct answer from the following: 1×3=3

- (i) The term taxonomy was coined by A. P. de Candolle/Carolus Linnaeus/Julian Huxley.
- (ii) When both the stamens and pistils of a flower fused to form a single structure is called pollinium/gynostemium/stylopodium.
- (iii) According to Hutchinson, the primitive angiospermic flowers are pentamerous/trimerous/polymerous.

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(Turn Over)

(2)

(b) Fill in the blanks : $1 \times 2 = 2$

(i) Inflorescence of the family
Lamiaceae is ____.

(ii) When the anthers and filaments of
stamens are united is called ____.

(c) Write briefly on the following (any five) :
 $2 \times 5 = 10$

(i) Significance of plant systematics

(ii) Floras and manuals

(iii) Taxonomic species concept

(iv) OTUs

(v) Typification

(vi) Author citation

2. Write notes on the following (any three) :
 $4 \times 3 = 12$

(a) Dichotomous key

(b) Phenograms and cladograms

(c) Affinities of family Malvaceae

(d) Primitive characters of the family
Magnoliaceae

(e) Rules and recommendations of ICN

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(Continued)

(3)

3. Define numerical taxonomy. State the
principle of numerical taxonomy. Discuss
the method of this study. $2+2+4=8$

Or

Write about the distinguishing characters of
the following families : $4 \times 2 = 8$

(a) Brassicaceae

(b) Poaceae

4. Describe the phylogenetic system of plant
classification proposed by Engler and Prantl.
Mention the merits and demerits of the
classification. $6+4=10$

Or

Write notes on the following : $5 \times 2 = 10$

(a) Concept of parallelism and convergence

(b) APG system of classification

5. What is herbarium? Describe the steps to
preserve a plant in herbarium. Mention the
importance of herbarium. $1+5+2=8$

Or

Write notes on the following : $4 \times 2 = 8$

(a) Virtual herbarium

(b) Biometrics

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