4 SEM TDC BOTH (CBCS) C 10

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(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 angispermic flowers are pentamerous/trimerous/polymerous.

(Turn Over)

(b) Fill in the blanks : 1×2=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*) : 2×5=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*) : 4×3=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

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 : 4×2=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 : 5×2=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 : 4×2=8

(a) Virtual herbarium

(b) Biometrics

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