M. Sc. 2nd Semester Examination, 2025

BOTANY

(Angiosperms Taxonomy & Biosystematics)

PAPER — BOT-201 (2023-24)

Full Marks : 50

Time : 2 hours

Answer **all** questions

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

GROUP—A

Answer any **four** of the following :   2 × 4

1. Define cryptic species with an example.

2. Define keystone species with an example.

3. Who is the father of Biosystematics ?

4. Define Flora with an example.

5. What are eudicots ? Give an example.

6. What is Taxonomic hierarchy and who established it ?

GROUP—B

Write the differences between the following pairs (any *four*) : 4 × 4

7. Homology & Homoplasy

8. Apomorphy & Plesiomorphy

9. Systematics & Taxonomy

10. Endangered and Rare Plants

11. Polyphyly and paraphyly

12. What is the meaning of the acronyms GAL & OXF ?

GROUP — C

Answer any two of the following : 8 × 2

13. Define artificial, natural and phylogenetic systems of classification. What sets integrated phylogenetic classification apart from true phylogenetic classification ? Additionally, provide an overview of the APG system of classification (APG-IV) mentioning its advantages and drawbacks. 3 + 2 + 3

14. Define Herbarium. Who was the first to discover Herbarium ? What are the objectives of an Herbarium ? What are the differences between a traditional and a virtual Herbarium, providing examples of each ? 2 + 1 + 2 + 3

15. Define plant nomenclature. Describe the key rules of the International Code of Botanical

Nomenclature (ICBN). In which year was the ICBN renamed as the International Code of Nomenclature (ICN). What are the main differences between ICBN and ICN ?

$1 + 3 + 1 + 3$

16. Define Biodiversity and Hotspots. Who coined these terms ? Write the significance of Biodiversity and Hotspots on the conservation point of view ? How many hotspots are in the world as well as in India ?

$2 + 1 + 3 + 2$

[Internal Assessment — 10 Marks]