

Exam. Code : 210004

Subject Code : 5467

M.Sc. (Botany) 4<sup>th</sup> Semester

**DIVERSITY AND BIOLOGY OF ANGIOSPERMS**

**Paper—BOTC—626**

Time Allowed—3 Hours]

[Maximum Marks—50

**Note** :— Attempt **ALL** the parts of Question No. 1 from Section A, **SEVEN** questions from Section B and **THREE** questions from Section C. Draw neatly labeled diagrams wherever required. Marks for each question are indicated in the paper.

**SECTION—A**

1. Write about 4 lines on each of the following :

- (i) Phylogeny
- (ii) Alpha taxonomy
- (iii) Type concept
- (iv) Apocarypy
- (v) Hybrid complex
- (vi) Ecospecies
- (vii) Bio-realms
- (viii) Invasive species.

1×8=8

**SECTION—B**

**Note** :— Attempt any **SEVEN** of the following questions in about **2** pages each.

2. What is meant by an artificial system of plant classification ? Illustrate with one such system.
3. Elucidate the salient features of Engler and Prantl's system of angiosperm classification.
4. Elucidate the concept of priority in plant nomenclature with a suitable example.
5. Discuss the role of herbaria in plant classification with some examples.
6. Illustrate the significance of pollen structure in angiosperm classification.
7. Discuss the formation and taxonomic significance of agamic complexes.
8. Elucidate the concept and construction of phylogenetic trees with a hypothetical example.
9. Discuss the diagnostic characters and taxonomic relations of the order Helobiales.
10. What is endemism ? Illustrate with suitable examples.
11. Elucidate the socio-economic relevance of plant diversity with suitable examples from your area.  $3 \times 7 = 21$

### SECTION—C

**Note** :— Attempt any **THREE** of the following questions in not more than **4** pages each.

12. Elaborate Takhtajan's system of classification of angiosperms as a forerunner of later systems. Discuss the merits of the system.
13. Discuss diagnostic characters and phylogenetic significance of the order Ranales.
14. Dwell upon the role of anatomy in plant classification with special reference to angiosperms.
15. What is biosystematics ? Discuss the steps in biosystematic analysis and define various taxonomic categories.
16. Discuss the phytogeographic classification of the world with special reference to the territories of India.

3×7=21