

2023

4th Semester Examination

BOTANY (Honours)

Paper : C 10-T

(Plant Systematics)

[CBCS]

Full Marks : 40

Time : Two Hours

*The figures in the margin indicate full marks.
Candidates are required to give their answers
in their own words as far as practicable.*

Group - A

Answer any *five* of the following questions :

2×5=10

1. Define a single access key. Mention one of its advantages. 1+1=2
2. How does systematics differ from taxonomy? 2
3. Name one Botanical Garden of India along with its acronym. 1+1=2
4. What is a virtual herbarium? Mention one advantage of it. 1+1=2

P.T.O.

(2)

5. What is the difference between flora and monograph?
1+1=2
6. Mention two primitive characters of Magnoliaceae. 2
7. Name the book in which Arthur Cronquist proposed his classification of plants. Enumerate two principles of his classification.
1+½+½=2
8. What is meant by symplesiomorphies and synapomorphies?
1+1=2

Group - B

Answer any *four* of the following questions :

5×4=20

9. Write briefly about Biological species concept and Evolutionary species concept.
2+3=5
10. Enumerate the characters of a primitive dicot. Enumerate the advanced characteristics of the family Orchidaceae.
2+3=5
11. What is a cladogram? Mention one molecular trait used to construct a cladogram. What is a clade? Mention the position of newly evolved species in a cladogram.
2+1+1+1=5
12. Define monophyletic and polyphyletic taxa. Schematically represent the interrelationship between monophyletic, polyphyletic, and paraphyletic taxa.
2+3=5

(3)

13. Discuss the principles of priority and its limitations. 3+2=5
14. Discuss in detail the principles of ICN. 5

Group - C

Answer any *one* of the following questions :

10×1=10

15. Schematically illustrate Bentham and Hooker's system of classification of plants. Mention the merits of Bentham and Hooker's system of classification. Define the terms Archichlamydeae and Metachlamydeae. 6+2+2=10
16. What is a flora? How does it differ from a monograph? Briefly discuss the contribution of Takhtajan in angiosperm classification. Differentiate between holotype and syntype. 2+3+3+2=10
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