

U.G. 4th Semester Examination - 2024

BOTANY**[HONOURS]**

Course Code : BOT-H-CC-T-08

(Taxonomy of Angiosperms & Plant Systematics)

Full Marks : 40

Time : 2½ Hours

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

1. Answer any five of the following questions :

2×5=10

- a) Arrange the following according to hierarchy:
Tribe, Family, Order, Class, Genus, Sub-order.
2
- b) How does Cucurbitaceae differ from
Compositae in the characters of androecium?
2
- c) What is Omega Taxonomy? 2
- d) Who did first establish AJCB IBG and in which
year? 1+1
- e) Distinguish between phenetics and cladistics.
2
- f) Mention the full forms of IAPT and IAAT.
1+1

[Turn over]

g) Name the largest Indian herbarium and state its acronym. 1+1

h) Explain the terms 'homology' and 'analogy' with example. 1+1

2. Answer any two of the following questions:

5×2=10

a) Write the functions of herbarium in taxonomic studies. Define acronym and mention one example. 3+2

b) Comment on Plesiomorphy of the family Magnoliaceae. 5

c) Enumerate the pollen characters of taxonomic importance. Cite two examples for application as taxonomic markers. 2+3

d) Assign the following plants to their respective families and point out the type of fruit of each plant: *Michelia*, *Triticum*, *Ricinus*, *Leonurus*, *Areca*. $2\frac{1}{2}+2\frac{1}{2}$

3. Answer any two questions from the following:

10×2=20

a) Mention the basic differences between natural and phylogenetic system of classification. Give a broad outline of Bentham and Hooker's classification. Mention its demerits. 2+5+3

b) Mention the diagnostic characters of the family Malvaceae. Mention the type genus and systematic position of this family according to a classification system studied by you. Name two economically important plant species from the family and state their uses.

5+1+2+2

c) What are homogamous and heterogamous capitula? Draw and describe the floral characters of the family Compositae. Point out its advance characters. 2+6+2

d) Write the principles of ICN. Explain the author citation in the following: 6+4

Catharanthus roseus (Linn.) G. Don

Acalypha racemosa Wall, ex Benth.