

U.G. 4th Semester Examination - 2022**BOTANY
[HONOURS]****Course Code : BBOTCCHC403****Course Title : Plant Systematics**

Full Marks : 30

Time : 2 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 **ten** of the following questions:

1×10=10

- a) What is systematics?
- b) Give the alternate name of family Asteraceae.
- c) Define Paratype.
- d) What is Nomen Nudum
- e) What is arboratum?
- f) What is valid publication?
- g) Define author citation.
- h) Define clade.

- i) What is the difference between artificial and natural system of classification?
- j) What do you mean by taxonomic keys?
- k) Define Ecological Species Concept.
- l) Name the largest botanical garden of India.
- m) State any two primitive characters with respect to plant evolution.
- n) What is biosynthetic phase?
- o) Define Type.

2. Answer any **five** from the following questions:

2×5=10

- a) Distinguish between homology and analogy.
- b) Mention any two functions of herbarium.
- c) What are the major contributions of Takhtajan in Taxonomy?
- d) How polyphyly differs from paraphyly?
- e) Give the principles used in naming Hybrids in taxonomy.
- f) What type of molecular data used in plant taxonomy?
- g) What is 'rules of priority'?

h) Write any two cytological characters that help in taxonomic identification.

3. Answer any **two** from the following questions:

5×2=10

a) What is OTU? How does cluster analysis done in taxonomy? 1+4

b) Explain briefly the role of palynology as taxonomic evidence.

c) Write down the classification system of Engler and Prantl (up to series). Mention one merit and one demerit of this system. 4+1
