

PG CBCS
M.SC. Semester-IV Examination, 2021
BOTANY
PAPER: BOT 403A
(MOLECULAR SYSTEMATICS)

Full Marks: 40

Time: 2 Hours

Answer any FOUR questions from the following:

10 x 2 = 20

1. What is Molecular Systematics? Name any four molecular technique utilised for plant systematic study. Write the role of molecular data in deciphering taxonomic position. 2+2+6
2. Name two search engines and sequence repositories. What is the difference between Cp DNA and mt DNA? Write short notes on RAPD and RFLP with special emphasis on molecular systematics. 2+3+5
3. What do you mean by taximetrics? Write down the principles of taximetrics. Discuss different applications of numerical taxonomy. 2+4+4
4. Name two Mangrove plants with family. Briefly discuss the adaptive features and phylogeny of parasitic plants. 2+4+4
5. What is the main difference between endangered and threatened taxa? Name two dye yielding and aromatic plants. How Molecular biology helps in identifying the endangered and threatened medicinal plant taxa. 2+2+6
6. What do you mean by drug adulteration? What is DNA barcoding? How DNA barcoding is used for authentication and identification of medicinal plants. 2+2+6
7. What is E- Herbarium? Briefly discuss about the merits and demerits of digital herbarium. 2+4+4
8. Differentiate between: 2.5×4
 - a. Phenetic and Cladistic
 - b. Cladogram and Dendogram
 - c. Binary character and Multistate character
 - d. Two state coding and multistate coding
