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PG CBCS
M.Sc. Semester-IV Examination, 2022
BOTANY
 PAPER: BOT403A (SPL PAPER)
 (MOLECULAR SYSTEMATICS)

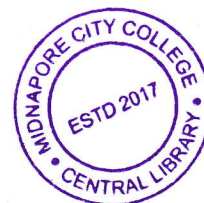
Full Marks: 40

Time: 2 Hours

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

GROUP-A**1. Answer any four of the following:****2×4=8**

- a) What are r DNA and ITS?
- b) Define molecular systematic.
- c) What are SNPs?
- d) What are mangroves associates?
- e) Give two important adaptive features of parasitic plants.
- f) What is cluster analysis?
- g) Mention any four techniques used in molecular taxonomy.
- h) What does it mean by phenon?

**GROUP-B****2. Answer any four of the following:****4×4=16**

- a) Differentiate between endangered and threatened plant as per categories of IUCN.
- b) Write down the adaptive featured of insectivorous plants.
- c) Mention the techniques for detection of aromatic plants.
- d) Differentiate between phonetics and cladistics.
- e) Write down the uses of mtDNA and nuclear gene in molecular systematic.
- d) Write down the attributes of numerical taxonomy.
- e) Write a short note on molecular marker.
- h) What are hemiparasites? Name any two dye yielding plants of West Bengal. 2+2

GROUP-C**3. Answer any two questions of the following:****8×2=16**

- a) Write the importance of herbarium. Differentiate between traditional and digital herbarium. Write the merits of digital herbarium. 3+3+2
- b) What is DNA barcoding? Write the uses of DNA barcoding in authentication and identification of medicinal plants. 2+3+3
- c) Write Neo Adansonian principles and mention the application of numerical taxonomy. 6+2
- d) Differentiate between vivipary and cryptovivipary. Write the adaptive features of mangrove plants and their distribution in West Bengal. 2+4+2
