



'সমানো মন্ত্র: সপিত্তি: সমানী'

UNIVERSITY OF NORTH BENGAL

B.Sc. Major 1st Semester Examination, 2023

UBOTMAJ11001-BOTANY

ORIGIN OF LIFE AND PLANT DIVERSITY

Time Allotted: 2 Hours

Full Marks: 40

The figures in the margin indicate full marks.

GROUP-A

1. Answer any **five** questions: 1×5 = 5
- Define Panspermia.
 - What are coacervates?
 - Name one medicinally important gymnosperm.
 - Write the source of Agar-agar.
 - Name one unicellular eukaryotic organism.
 - Who proposed three-kingdom classification?
 - Define Index fossil.
 - Which algal group is devoid of any flagellated structures?

GROUP-B

2. Answer any **three** questions: 5×3 = 15
- Write briefly about the five kingdom classification proposed by R.H. Whittaker in 1969. 5
 - Differentiate between- 2½+2½
 - Archegoniates and Thallophytes
 - Prokaryotic cell and Eukaryotic cell.
 - Write the salient features of Bryophytes. 5
 - Define hydrophytes, mesophytes and xerophytes with one example in each category. 5
 - Differentiate between allopatric and sympatric speciation. Explain why allopatric speciation is also called as geographic speciation. 3+2

GROUP-C

3. Answer any **two** questions: 10×2 = 20
- What is prebiotic soup? State and explain in brief, the different theories of evolution which were proposed by Lamarck, Wallace, Darwin and De Vries respectively. 2+8
 - What is ICN? What is Encyclopaedia of Life? Discuss the industrial use of Algae and use of Algae as food. 1+1+4+4
 - How do bryophytes and pteridophytes differ? Name a few plants that evolved during carboniferous period. Give a schematic representation of 7 kingdom classification. 3+2+5
 - Write short notes on: 5+5
 - Miller-Urey Experiment
 - Geological time Scale.

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