

**2008****M.Sc.****1st Semester Examination****BOTANY****PAPER—I***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.*

*Illustrate the answers wherever necessary.*

*(Write the answers Question of each Unit in separate books)*

*Answer all questions.*

**Unit—I****[ Marks—20 ]**

1. Answer any four questions 1×4
- (a) Name a filamentous member of Prochlorophyta.
  - (b) Mention an algal division devoid of chlorophyll b but bearing chlorophyll c.
  - (c) What does a nucleomorph signify ?
  - (d) Which component of alginic acid is responsible for its gelling property ?
  - (e) Why rRNA molecules are studied to get molecular resemblance between species ?
  - (f) Contrast the thylakoids of Cyanophyta with that of Prochlorophyta.
  - (g) Mention at least two accessory pigments of Rhodophyta.

*(Turn Over)*

2. Write short notes on any two of the following : 4×2
- (a) Parallelism in algae;
  - (b) Use of ultrastructural studies in algal classification;
  - (c) Salient features of Rhodophyta.
  - (d) Source, chemistry and uses of alginates.

3. Illustrate the polyphyletic nature of Chlorophyta. 8

Or

Give an account of the use of molecular biology in algal classification.

### Unit—II

[Marks—20]

4. Answer any four : 1×4

- (a) What is amphigasteria? Give an example.
- (b) Who is the father of Indian Bryology.
- (c) What is diplolepidous moss.
- (d) What is bryomonitoring.
- (e) Name one fuel yielding bryophyte.
- (f) Name one sulfur indicating bryophyte.
- (g) What is Sphero-Riccia?

5. Write short notes (any two) : 4×2

- (a) Regressive theory of evolution
- (b) Ecotype
- (c) Biotechnology of Bryophytes
- (d) Systematic position of Calcibryales

6. Give details characteristics affinities and systematic position of Takakiales. What is the basic chromosome number of Takakia? (2+2+2)+2

Or

What is Karyotype? What are the significance of chromosome number in taxonomic implication of bryophytes? What is 'm' chromosome? Give significance of 'm' chromosome. 1+3+2+2