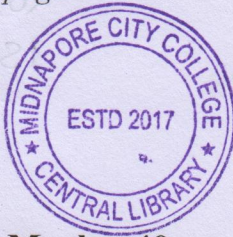


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PG (NEW) CBCS
M.Sc. Semester-I Examination, 2018
BOTANY
PAPER: BOT-102
(PHYCOLOGY & BRYOLOGY)

**Full Marks: 40****Time: 2 Hours**

Write the answer for each unit in separate sheet

UNIT I:

PHYCOLOGY

1. **Answer any two questions of the following:** 2×2=4
 - a) What is carboxysome? Mention its function.
 - b) Mention the unique feature of Heterokontophyta and Glaucophyta.
 - c) What is 'auxospore'? Why are they called growth spores?
 - d) Name one pathogenic algae mentioning its disease caused.
2. **Write short notes (any two)** 4×2=8
 - a) Role of algae in Pisciculture.
 - b) Role of algae in soil reclamation.
 - c) Parameters used in algal classification.
 - d) Algae as single cell protein.
3. **Answer any one question of the following:** 8×1=8
 - a) State the basic principle of single copy DNA-DNA hybridization used in determining the relation between algal taxa. Highlight the major features of evolution in members of chlorophyta. 3+5=8
 - b) What are phycocolloids. Write down the algal sources and uses of agar-agar and carrageenan, mentioning their chemical nature. 1+4+3=8

UNIT II:

BRYOLOGY

4. **Answer any two questions of the following:** 2×2=4
 - a) Why is sphagnum not a true moss?
 - b) Name one mercury and SO₂ tolerant bryophyte.
 - c) Name one bryophyte which has lowest chromosome number & one free floating aquatic liverwort.
 - d) Mention the significance of Haplomitrium and Takakia.
5. **Write short note (any two):** 4×2=8
 - a) Biotechnology in bryophytes
 - b) Bryomonitoring of pollution
 - c) Ecological role of sphagnum.
 - d) Discuss the role of bryophytes in plant succession.
6. **Answer any one question of the following:** 8×1=8
 - a) What is meant by cytogenetics of bryophytes? Write the chromosomal diversity in bryophytes and their applications in taxonomy with examples. 1+2+5=8
 - b) What are secondary metabolites? Write some secondary metabolites mentioning their taxonomical implications. 4+4=8
