

**Raja N. L. Khan Women's College (Autonomous)
End Semester Examinations-2022**

BOTANY [PG-CBCS]

[M. Sc] (Theory)

PAPER-102

Paper – PHYCOLOGY ANDBRYIOLOGY

Full Marks: 40 Time: 02 Hrs

Answer all questions

*The figures in the right hand margin indicate marks
Answer should be given within 8 pages of A4 size.*

Unit-I (PHYCOLOGY)

F.M=20

1. [Answer any FOUR Questions] 1x4=04

- Name the type of chloroplastids present in *Volvox sp.*?
- What is the name of fruit body found in certain members of Rhodophyta? Name those members.
- What is frustule?
- What is meant by Heteromorphic Diplohaplontic life cycle of algae?
- Define endosymbiotic gene transfer.
- What kind of photoreceptor is found in *Chlamydomonas* cell?
- What is periplastidial space?

2. [Answer any TWO Questions] 4x2=08

- Discuss in brief the phylogenetic relationship among the algal divisions, which have given rise to higher groups of plants.
- Write about the different types of asexual reproduction in algae.
- Discuss the similarities between Cyanophyta and Rhodophyta.
- Discuss about the evolution of sex among the Chlorophycean members.

3. [Answer any ONE Question] 8x1=08

- a) Briefly discuss about the evolution of sex in algae.
- b) Write the classification of algae with the features of divisions as proposed by Robert E Lee.

Unit-II (BRYOLOGY)

F.M=20

1. Answer any four questions. 4x1=4

- a) What are perichaetial leaves? What is its function?
- b) Name one fossil bryophytes and write down its geological age of occurrence.
- c) Name two Bryophytes used in environmental monitoring.
- d) Why elaters are diploid?
- e) What is the taxonomic position of *Takakiaceratophyla*?
- f) What is the morphological nature of archegoniophore?
- g) Name the classes with nematodontous peristome teeth.

2. Answer any two questions. 2x4=8

- a) With suitable diagrams describe range of thallus structure found in three major divisions of bryophytes.
- b) Give the classification of Bryophyta up to class according to recent analysis that you have studied.
- c) Write a note on ecological importance of bryophytes.
- d) What are the structural modifications in bryophytes for land adaptation?

3. Answer any one. 1x8=8

- a) Briefly discuss about the characteristics and systematic position of Takakiales and Calobryales.
- b) Describe about the sporophytic evolution of bryophyte.