

- (b) Describe the lysogenic cycle with proper sketch.
- (c) Discuss the distinguish characters of Cyanophyceae. Why this group is also called 'cyanobacteria'?
- (d) Draw the sexual cycle of *Chara*. Name one Indian species of *Chara*.

### Unit-III

3. Answer **any one** question : 10×1=10
- (a) Describe with proper diagram the post-fertilization changes in *Polysiphonia*. Mention the economic values of diatomite.
- (b) Give a brief account of the structure of endospore. Describe the detailed structure of TMV.

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## B.Sc. 1st Semester (Honours) Examination-2022-23

### BOTANY

Course ID : 11311 Course Code : SH/BOT/101/C-1

Course Title : Archegoniate and Palaeobotany (New)

Time : 1 Hour 15 Minutes

Full Marks : 25

*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.*

### Unit-I

1. Answer **any five** questions : 1×5=5
- (a) Name a drug-yielding taxon of gymnosperms.
- (b) Mention the periods of the Palaeozoic era in an ascending order.
- (c) Name a pteridophyte used in agriculture and why?
- (d) What is calyptra?
- (e) What are carinal canals?
- (f) Name one aquatic bryophyta.

- (g) Write the fern characters of *Cycas*.  
 (h) Which type of rock is best suited for preservation of fossils?

### Unit-II

2. Answer **any two** questions : 5×2=10
- (a) Write a short note on applications of fossil study in Botany.  
 (b) Write a short note on economic importance of Pteridophyta.  
 (c) Write short note on progressive sterilization of the sporophyte in bryophytes.  
 (d) Describe the anatomical structure of the leaf of *Pinus*.  
 (e) Write a brief note on the algal origin of bryophytes.

### Unit-III

3. Answer **any one** question : 1×10
- (a) Describe the elementary process of the telome concept. Describe the internal structure of *Funaria* Sporophyte with neat Sketches. 4+6  
 (b) Draw and describe the male fructifications of *Cycas* and *Gnetum*. 5+5

## Course Title : Phycology & Microbiology (Old)

### Unit-I

1. Answer **any five** questions : 1×5=5
- (a) What is batch culture?  
 (b) Example one dsRNA virus.  
 (c) Example any two industrially important bacteria with their roles.  
 (d) What is capsomere?  
 (e) Name one alga possesses c-phycoyanin.  
 (f) Mention the principle role of heterocyst.  
 (g) Example any two edible algae.  
 (h) What is pyrenoid?

### Unit-II

2. Answer **any two** questions : 5×2=10
- (a) Make a short note about bacterial conjugation with proper diagram.