

**CARMEL COLLEGE OF ARTS, SCIENCE & COMMERCE FOR WOMEN**  
**NUVEM-GOA**  
**SEMESTER END EXAMINATION, JANUARY 2022**

Semester: **I of B. Sc.**      Course name & Code: **Botany BOC-101: Biodiversity-1**  
**Total Marks: 80**      **Date: /01/2022**      **Duration: 2 Hours**      **Total No of pages:02**

*Instructions: 1) All questions are compulsory.  
2) Figures to the right indicate marks.  
3) Draw appropriate diagrams wherever necessary.*

**Q.I. Answer any six of the following. (2 x 6=12)**

1. What is a bacteriophage?
2. What are thermoacidophiles?
3. Define entomopathogenic fungi.
4. Mention the composition of fungal cell wall.
5. List any four types of habitat of algae with one example for each.
6. What is siphonaceous thallus? Give two examples.
7. List the four orders of class Hepatica.
8. Draw a labelled diagram of archegonium in *Riccia*.

**Q.II. Answer any five of the following. (4 x 5=20)**

1. Distinguish between lytic and lysogenic cycle.
2. Explain Griffith's experiment to demonstrate transformation in bacteria.
3. Write a note on types of septal pores in filamentous fungi.
4. List the different types of asexual spores in algae.
5. Write a short note on structure of trichome in *Nostoc*.
6. List the differences between algae and bryophytes.
7. Write a note on economic importance of bryophytes.

**Q. III. A. With the help of a labelled diagram, describe bacterial cell structure. (6)**

**OR**

**A. Elaborate on the harmful role of bacteria. (6)**

**B. Describe the structure of TMV. (6)**

Q. IV. A. Elaborate on the different types of mycorrhizae. (6)

OR

A. Outline the classification of fungi as proposed by Ainsworth. (6)

B. With a labelled diagram, describe the life cycle of *Rhizopus*. (6)

Q. V. A. Describe the thallus organization in *Polysiphonia*. (6)

OR

A. Describe the lateral conjugation in *Spirogyra*. (6)

B. Explain sexual reproduction in *Sargassum*. (6)

Q. VI. A. Describe the structure of sporophyte in *Anthoceros*. Add a note on its tendency towards independent life. (6)

OR

A. Describe the structure of *Funaria* capsule and add a note on mechanism of its spore liberation. (6)

B. With a neat labelled diagram, describe the anatomical features of *Riccia* thallus. (6)