

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

Semester: I B.Sc.

Course: BOTANY DSC - BOC101 (Biodiversity-1)

Total Marks: 80

Date: 28/11/2022

Duration: 2 Hours

Total No of Pages: 02

- Instructions:** 1. All questions are compulsory; however internal choice is available.
2. Figures to the right indicate full marks.
3. Draw appropriate diagrams wherever necessary.

Q. I. Answer any six of the following:

(2 marks x 6 = 12)

1. List the components of a virus.
2. List any two points of difference between eubacteria and mollicutes.
3. What are coprophilous fungi?
4. Define appressorium.
5. Name the different types of rhizoids in *Riccia*, *Anthoceros* and *Funaria*.
6. List the different types of multicellular thallus organization in algae.
7. What is an akinete? Name an alga producing it.
8. List any four types of vegetative reproduction in Bryophytes.

Q. II. Answer any five of the following:

(4 marks x 5 = 20)

- a. Why are viruses considered to be on the threshold of life and non-life?
- b. Explain Griffith's experiment to demonstrate transformation in bacteria.
- c. Write a short note on arbuscular mycorrhizae.
- d. List the different types of asexual spores in algae.
- e. Write a short note on reproduction in *Nostoc*.
- f. List the differences between algae and bryophytes.
- g. Write a short note on ecological importance of bryophytes.

Q. III. A. Describe the cytoplasmic components of a bacterium.

(6)

OR

A. Describe the role of bacteria in food production.

(6)

B. Elaborate on the steps involved in viral replication.

(6)

Q. IV. A. Describe the methods of vegetative reproduction in lichens.

(6)

OR

A. Describe the life cycle of *Rhizopus*.

(6)

B. Outline the economic importance of fungi with reference to medicine.

(6)

Q. V. A. What is scalariform conjugation? Describe the process in *Spirogyra*. (6)

OR

A. With a neat labelled diagram, describe the anatomical features of thallus in *Polysiphonia*. (6)

B. Write a note on economic importance of algae with respect to:
a) medicine and b) biofertilizers (6)

Q. VI. A. Describe protonema and gametophore in *Funaria*. (6)

OR

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

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

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