



**WEST BENGAL STATE UNIVERSITY**  
B.Sc. Honours 1st Semester Examination, 2021-22

**BOTACOR01T-BOTANY (CC1)**

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.  
Candidates should answer in their own words and adhere to the word limit as practicable.*

**GROUP-A**

1. Answer **all** questions from the following: 1×3 = 3
  - (a) What do you mean by virion?
  - (b) Why bacterial endospores are too much resistant to environment?
  - (c) What is 'S layer'? Where it is found?
  
2. Answer any **four** questions from the following: 3×4 = 12
  - (a) Describe the DNA uptake procedure in bacterial cell during transformation.
  - (b) Write a note on bacterial nutrition.
  - (c) Describe the "three domain concept" of microorganisms.
  - (d) Draw and describe the growth phase of bacteria.
  - (e) What is vaccine? Describe two different types of vaccine with example.
  - (f) Write a short note on Archaeobacteria.
  
3. Answer any **one** question from the following: 5×1 = 5
  - (a) Describe the cell structure of Eubacteria with suitable illustrations.
  - (b) Citing suitable example write down the major role of bacteria in agriculture.

**GROUP-B**

4. Answer **all** questions from the following: 1×3 = 3
  - (a) Name the main pigment and reserve food material in Phaeophyceae.
  - (b) Name a coenocytic algae.
  - (c) Mention the significance of root cap cells in the genus *Oedogonium*.

5. Answer any *four* questions from the following: 3×4 = 12
- (a) Draw and label the ultrastructure of cell wall of Cyanophyta.
  - (b) Mention the evolutionary significance of *Prochloron*.
  - (c) What is dwarf male? Mention its function.
  - (d) Write down the role of algae in industry.
  - (e) Diagrammatically represent the life-cycle of *Ectocarpus*.
  - (f) Draw and describe the asexual reproduction of a coenocytic algae you have studied.
6. Answer any *one* question from the following: 5×1 = 5
- (a) Draw and describe the ultrastructure of algal flagella.
  - (b) Write a note on range of thallus structure in chlorophyceae.

**N.B. :** *Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.*

—×—