



WEST BENGAL STATE UNIVERSITY
B.Sc. Honours 1st Semester Examination, 2020, held in 2021

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) Name one acid fast bacteria.
 - (b) Name one disease caused by Prion.
 - (c) Write the membrane characters of Archaea.

2. Answer any **four** questions from the following: 3×4 = 12
 - (a) Write the differences between membrane structures of bacteria and archaea.
 - (b) Draw the labeled structure of TMV and mention their physico-chemical characters.
 - (c) Write the differences of various types of recombination in bacteria.
 - (d) Differentiate between the cell wall of Gram (+) and Gram (–) bacteria. Write down the special component present in *Mycobacterium* cell wall.
 - (e) Mention the role of small subunit of ribosome in bacterial classification.
 - (f) Draw and describe the physico-chemical characteristics of a plant virus.

3. Answer any **one** question from the following: 5×1 = 5
 - (a) Draw and describe the different steps of lytic cycle in a bacteriophage.
 - (b) With suitable examples, write a note on different types of vaccines.

GROUP-B

4. Answer **all** questions from the following: 1×3 = 3
 - (a) Name the main pigment and reserve food material in Rhodophyceae.
 - (b) What is Gaidukov phenomenon?
 - (c) Name one algae where isomorphic alternation of generation is found.

5. Answer any **four** questions from the following: 3×4 = 12
- (a) Draw and label the sexual reproductive structures in *Chara*.
 - (b) In which algae 'daughter colony' is found? Describe the structure of this algae.
 - (c) Write a short note on the range of thallus structure of Phaeophyceae.
 - (d) State the diagnostic characters of Cyanophyta.
 - (e) What is triphasic life cycle? Where it is found? Why it is so named?
 - (f) What is diatomite? Mention the economic importance of diatomite.
6. Answer any **one** question from the following: 5×1 = 5
- (a) Draw and describe the life cycle of a monoecious macrandrous *Oedogonium*.
 - (b) Illustrate with diagram the sexual reproduction in *Vaucheria*.

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.*

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