

U.G. 2nd Semester Examination - 2020

BOTANY

[HONOURS]

Course Code : BOTH/CC-T-03

Full Marks : 40

Time : 2½ Hours

The figures in the right-hand margin indicate marks.

Candidates are required to give their answers in their own words as far as practicable.

Answer all the questions.

1. Answer any **five** questions: 2×5=10
- a) What is endospore? Give an example.
 - b) What is prion?
 - c) What is the function of pili?
 - d) What is plasmid?
 - e) Why Cyanophycean members are called as Cyanobacteria?
 - f) Name two pigments found in brown algae.
 - g) Mention the source and importance of algin.
 - h) Define heterotrichous thallus with example.

2. Answer any **two** questions: 5×2=10
- a) Draw and describe the structure of TMV. 5
 - b) Write a short note on the economic importance of bacteria. 5
 - c) Mention the salient features of Charophyta. 5
 - d) State the role of algae in agriculture. 5
3. Answer any **two** questions: 10×2=20
- a) With labelled sketches describe the mechanism of transformation in Gram positive bacteria. Mention the differences between Gram positive and Gram negative bacterial transformation process. 7+3
 - b) What is peptidoglycan? With suitable diagram illustrate the chemical structure of peptidoglycan found in the bacterial cell wall. 2+8
 - c) What is macrandrous and nanandrous species of *Oedogonium*? Illustrate the sexual reproduction in a macrandrous species of *Oedogonium* with suitable diagram. 3+7
 - d) Mention the salient features of Xanthophyta. With suitable labelled diagram describe the reproduction of *Vaucheria*. 4+6