

B.Sc. Semester-II Examination, 2022-23**BOTANY [Honours]**

Course ID : 21311

Course Code : SH/BOT/201/C-3

Course Title : Phycology & Microbiology

[NEW SYLLABUS]

Time : 1 Hour 15 Minutes

Full Marks : 25

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.***UNIT-I**

1. Answer any **five** of the following questions: $1 \times 5 = 5$
- What is nucleoid?
 - Define capsid.
 - Give one example of each Gram (+)ve and Gram (-)ve bacteria.
 - What is ghost cell?
 - Name one algal source of agar-agar.
 - Mention any two bacterial features of cyanophycean algae.

[Turn Over]

- What is Palmella stage?
- What is red tide?

UNIT-II

2. Answer any **two** of the following questions:

 $5 \times 2 = 10$

- Describe the structure of T-phage with proper illustration. $3+2$
- Write a short note on the use of bacteria in agriculture. 5
- Briefly describe the process of sexual reproduction in *Zygnema* with proper diagram. $3+2$
- Describe the characteristic features of the cell structure of diatom with diagram. $3+2$

UNIT-III

3. Answer any **one** of the following questions:

 $10 \times 1 = 10$

- What do you mean by isomorphic alternation of generation? Describe the life-cycle of *Fucus* with proper diagram. $3+7$
- Briefly describe the ultrastructure of flagella in bacteria with suitable diagram. $7+3$