

B. Sc. DEGREE END SEMESTER EXAMINATION: NOVEMBER 2023**SEMESTER 1: BOTANY****COURSE: 19U1CRBOT1: MICROBIOLOGY AND PHYCOLOGY**

(For Regular 2023 Admission and Improvement/Supplementary 2022/2021/2020/2019 Admissions)

Time: Three Hours

Max. Marks: 60

PART A**Answer All (1 mark each)**

1. What are microorganisms?
2. What do you mean by probiotics?
3. What do you mean by pilus in bacteria?
4. What do you mean by capsomere?
5. Define thallus. Give an example.
6. Name an alga that produces heterocysts.
7. Fucoxanthin is found in which group of algae?
8. From which group of algae, alginic acid is manufactured? **(1 x 8 = 8)**

PART A**Answer any 6 (2 marks each)**

9. What are hormogonia?
10. Comment on the functions of heterocysts.
11. Differentiate lytic cycle and lysogenic cycle of virus.
12. Comment on algae blooms.
13. What are the functions of bacterial cell membrane?
14. Write a note on bioremediation.
15. Give one example each for a motile and non-motile colonial alga.
16. Give two examples of Biofertilizers and Biopesticides. **(2 x 6 = 12)**

PART C**Answer any 4 (5 marks each)**

17. Explain the structure of TMV with the help of an illustration.
18. Explain the prokaryotic characters of Cyanophyceae.
19. What are pyrenoids? Explain its function.
20. Describe asexual reproduction in *Vaucheria*.
21. Explain and illustrate the organization of bacterial cell wall with special reference to the polysaccharide and peptide components.
22. Give an account of algae Which are used as source of medicine. **(5 x 4 = 20)**

PART D

Answer any 2 (10 marks each)

23. Give an illustrated account of asexual reproduction in *Volvox*.
24. Explain the process of replication in virus.
25. Three domain system of classification is now considered as more phylogenetic and advanced system of classification than five kingdom system of classification. Justify your answer.
26. With suitable diagrams, discuss sexual reproduction in *Oedogonium*.

(10 x 2 = 20)