Reg. No ..... Name **22U128**

B. Sc. DEGREE END SEMESTER EXAMINATION : OCTOBER 2022

SEMESTER 1 : BOTANY

COURSE : **19U1CRBOT1 : MICROBIOLOGY AND PHYCOLOGY**

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

Time : Three Hours Max. Marks: 60

PART A

Answer All (1 mark each)

1. Name an alga that shows heterotrichous habit.
2. What is aeromicrobiology?
3. Name a bacteria that has a role in biogas production.
4. In boilers and blast furnaces, diatomite is used as …….
5. Name a Virologist.
6. How does nucleoid differ from nucleus?
7. Name an alga that produces heterocysts.
8. Name the reserve food in Rhodophyceae.

(1 x 8 = 8)

PART B

Answer any 6 (2 marks each)

9. What are the different types of virus based on its genetic material? Give an example for each.
10. What are carpospores? Mention their ploidy level.
11. Name the pigments and food reserves of blue-green algae.
12. Explain probiotics.
13. What is eye spot? What is its function?
14. Explain differential staining with examples.
15. How do algae act as oxygen liberators?
16. What do you mean by “Bt”? State its significance.

(2 x 6 = 12)

PART C

Answer any 4 (5 marks each)

17. Explain the structure of bacteriophage with the help of a diagram.
18. Categorize the different methods of vegetative reproduction seen in algae.
19. Why the members of blue-green algae are known as Cyanobacteria?
20. Give an account of algae Which are used as source of medicine.
21. “It is not necessary to add nitrogen fertilizers to paddy fields.” Why?
22. Illustrate the ultra structure of flagellum in gram negative bacteria.

(5 x 4 = 20)

PART D

Answer any 2 (10 marks each)

23. Compare and contrast lytic cyle and lysogenic cycle of bacteriophage. Support your answer with suitable illustrations.
24. Categorise various modes of reproduction in *Volvox*.
25. Illustrate and explain the structure of cell envelope in gram negative bacteria.
26. Compare haplontic and diplontic life cycles with suitable examples and illustrations.

(10 x 2 = 20)