

B. Sc. DEGREE END SEMESTER EXAMINATION - OCT. 2020 : FEBRUARY 2021**SEMESTER 1 : BOTANY (CORE COURSE)****COURSE : 19U1CRBOT1 : MICROBIOLOGY AND PHYCOLOGY***(Common for Regular - 2020 Admission & Improvement / supplementary 2019 Admission)*

Time : Three Hours

Max. Marks: 60

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

1. What are synzoospores?
2. What is episome?
3. State an example for DNA virus and RNA virus.
4. Name any organism that helps in bioremediation.
5. Give one example for epizoic alga.
6. Name the reproductive structures in *Chara*.
7. Name a protein rich alga.
8. What is enrichment culture?

(1 x 8 = 8)**PART B****Answer any 6 (2 marks each)**

9. What is pili? Explain types and functions.
10. What are the different types of virus based on its genetic material? Give an example for each.
11. State the advantages of Biopesticides over chemical pesticides.
12. State the difference between primary and secondary treatment in sewage treatment.
13. How does false branching differ from true branching? Give one example each.
14. Comment on the functions of heterocysts.
15. What is the source of diatomite?
16. How do you differentiate pure culture and unialgal culture?

(2 x 6 = 12)**PART C****Answer any 4 (5 marks each)**

17. Give a comparative account of three domains of life.
18. Explain the structure of TVM with the help of an illustration.
19. Categorize the different methods of vegetative reproduction seen in algae.
20. Critically evaluate the association between cyanophycean members with other groups of plants.
21. Why the members of blue-green algae are known as Cyanobacteria?
22. Describe the role of algae in agriculture.

(5 x 4 = 20)**PART D****Answer any 2 (10 marks each)**

23. Explain the process of replication in virus.
24. Sexual reproduction is absent in bacteria. Yet bacteria are capable of genetic recombination. Explain.
25. With suitable diagrams, discuss sexual reproduction in *Oedogonium*.
26. Examine the structure and development of tetrasporophyte in *Polysiphonia*.

(10 x 2 = 20)