

M. Sc. DEGREE END SEMESTER EXAMINATION : OCTOBER 2022**SEMESTER 1 : BOTANY****COURSE : 21P1BOTT01 : MICROBIOLOGY AND PHYCOLOGY***(For Regular - 2022 Admission and Supplementary - 2021 Admission)*

Duration : Three Hours

Max. Weights: 30

PART A**Answer any 8 questions****Weight: 1**

1. What are symbiotic algae? Give any two examples. (U, CO 1, CO 3, CO 4)
 2. What is lytic life cycle in viruses? (R)
 3. What are endospores? (U)
 4. What is Chantransia stage? (E)
 5. Give an account on chemoautotrophs. (U)
 6. What are globule and nucule? (U, CO 1, CO 2)
 7. Describe microbial food contaminants with examples. (U)
 8. What are compound zoospores? Where do we find them? (U)
 9. What is BOLD? How is it helpful in species identification? (An, CO 1, CO 5)
 10. What is meant by halophiles? Give any example. (R)
- (1 x 8 = 8)**

PART B**Answer any 6 questions****Weights: 2**

11. Write short notes on (a) Algal bloom (b) Pyrenoids (c) Endospore (d) Heterocyst. (An)
 12. Write briefly on fossil algae. (U, CO 1, CO 5)
 13. What all are the characteristic features of Myxobacteria? (R)
 14. Give a detailed account on the ultra -structure of HIV. (U)
 15. Differentiate between capsule, slime layer and S-layer in bacteria. (An)
 16. Differentiate first, second and third-generation biofuels. (E, CO 3, CO 4)
 17. Morphological identification of algae is error-prone during the asexual phase. Justify. (Cr, CO 1, CO 2, CO 5)
 18. Comment on Amnesic Shellfish Poisoning. (U, CO 3, CO 4)
- (2 x 6 = 12)**

PART C**Answer any 2 questions****Weights: 5**

19. Discuss the ecological importance of algae. (An, CO 4)
- OR
20. Give an account of the range of thallus organization in Chlorophyceae. (E, CO 1)
 21. Examine stages in bacteriophage life cycles with suitable diagram and examples. (An)
- OR
22. Explain and illustrate the ultrastructure of flagellum in bacteria. Add a note on flagellation and mechanism of flagellar movement. (U)

(5 x 2 = 10)

OBE: Questions to Course Outcome Mapping

CO	Course Outcome Description	CL	Questions	Total Wt.
CO 1	Appraise the world of microbial diversity and their evolutionary relationships	E	1, 6, 9, 12, 17, 20	12
CO 2	Explain the reproductive behavior in Algae and other microbes	E	6, 17	3
CO 3	Examine the ecological significance of the lower groups of plants and protists	E	1, 16, 18	5
CO 4	Examine the economic significance of the lower groups of plants and protists	E	1, 16, 18, 19	10
CO 5	Develop a practice to collect and identify various algal forms	A	9, 12, 17	5

Cognitive Level (CL): Cr - CREATE; E - EVALUATE; An - ANALYZE; A - APPLY; U - UNDERSTAND; R - REMEMBER;