

M. Sc DEGREE END SEMESTER EXAMINATION - OCT 2020 : FEBRUARY 2021**SEMESTER 1 : BOTANY****COURSE : 16P1BOTT01 : MICROBIOLOGY AND PHYCOLOGY***(For Regular - 2020 Admission and Supplementary - 2016/2017/2018/2019 Admissions)*

Time : Three Hours

Max. Marks: 75

PART A**Answer any 8 (2 marks each)**

1. What all are the characters that make agar as an ideal solidifying agent in culture media?
2. What are the major proteins involved in flagellar basal body?
3. What are the biological significances of chemoorganotrophic heterotrophs?
4. How would you justify the inclusion of the Cyanophyceae among algae?
5. Give the major highlight of algal classification by R.E. Lee.
6. List various reserve food materials seen in algae.
7. Name any two algae that are used in phycoremediation.
8. Name any two commonly used algal culture media.
9. What is meant by pasteurization? What are its advantages?
10. What is lytic life cycle?
11. What are the distinctive properties of viruses?
12. Name any two commercially importance products obtained from Rhodophyceae.

(2 x 8 = 16)**PART B****Answer any 7 (5 marks each)**

13. Explain the replication of genetic material in bacteria.
14. Give a brief account on Rickettsias.
15. With suitable illustrations, explain various types of chloroplasts seen in green algae.
16. What are the major pigments seen in Rhodophyceae?
17. Briefly explain the ecological significance of algae.
18. How do algae preserved? Give commonly used preservative with its composition.
19. Explain the various types of food preservation techniques.
20. Give an account on Koch's postulates and its significance.
21. Write a brief account on lytic and lysogenic phages.
22. What is phycoremediation? Give suitable examples.

(5 x 7 = 35)**PART C****Answer any 2 (12 marks each)**

23. Explain and illustrate the ultrastructure of flagellum in bacteria. Add a note on flagellation and mechanism of flagellar movement.

OR

24. Compare the life cycle pattern of Rhodophyceae and Phaeophyceae.

25. Describe the salient features of Xanthophyceae.

OR

26. Write an essay on management of agricultural soil. Add a note on bio fertilizers and bio-pesticides.

(12 x 2 = 24)