



QP CODE: 25050624



Reg No :

Name :

MSc DEGREE (CSS) EXAMINATION DECEMBER 2025

First Semester

M Sc BOTANY

Core Courses - BY010101 - MICROBIOLOGY AND PHYCOLOGY

2019 Admission Onwards

A8DA5996

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

Weight 1 each.

1. Mention the contributions of Robert Koch in the growth of Microbiology.
2. Give an account on the nutritional mutants in bacteria.
3. What is the difference between selective and differential media?
4. Which groups of fungi are commonly observed as endophytes?
5. Briefly mention the contributions of Father of Phycology.
6. A coenobium is not a colony. Justify.
7. Discuss the various shapes or forms of chloroplast found in different algal members of Chlorophyceae.
8. Which is the symbiotic alga present in Anthoceros.
9. What are alginic acids.
10. Write a short note on FAA.

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

Weight 2 each.

11. Describe the ultrastructure of bacterial flagella with the help of a neat labelled diagram.
12. Explain various physical methods of sterilization.
13. Explain the process of specialized transduction in lambda phage.
14. Write a short note on: Centers of algal research in India.
15. Describe a Cynophycean cell wall structure.





16. Write a short description on *Rafatazmia chitrakootensis*
17. Describe the positive and negative effects of allelopathy with respect to algae.
18. Give an account of laboratory culturing of microalgae.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

Weight 5 each.

19. Explain the procedures for the identification of bacteria from a sample of soil using morphological and biochemical parameters.
20. Illustrate viral replication by lytic and lysogenic cycles.
21. Describe the post fertilization changes observed in Phaeophyceae and Rhodophyceae.
22. What are algal blooms? Write down the classification, causative organisms, symptoms and toxins of major algal blooms.

(2×5=10 weightage)

