



QP CODE: 21000497



21000497

Reg No : .....

Name : .....

**M Sc DEGREE (CSS) EXAMINATION, MARCH 2021**

**Third Semester**

Faculty of Science

M Sc MICROBIOLOGY

**Elective - MG870301 - MARINE MICROBIOLOGY**

2019 Admission Onwards

65513C40

Time: 3 Hours

Weightage: 30

**Part A (Short Answer Questions)**

*Answer any **eight** questions.*

*Weight **1** each.*

1. Define sulfur oxidizers
2. What are the of physical factors influencing the growth of marine microbes
3. What is meant by Pho system?
4. Write a note on cold shock proteins
5. What are the different sources of marine microbial diseases?
6. Comment on *Vibrio cholerae*.
7. What are the methods used to study MIC?
8. Mention the methods used for bioremediation of marine oil spills.
9. List the types of biosurfactants .
10. Explain the importance of enzymes from marine extremophiles.

(8×1=8 weightage)





### **Part B (Short Essay/Problems)**

*Answer any **six** questions.*

*Weight 2 each.*

11. Describe marine microbial communities.
12. Write a short account of salt pans
13. How are bacteria adapted to survive in conditions of high salinity?
14. What are the symptoms of marine food poisoning?. How can you prevent marine food borne infections?
15. Write a short essay on marine pollution.
16. Discuss the role of biofilms in pollution control
17. Write a note on brominated oxygen heterocyclic compounds derived from marine microorganisms
18. Describe bioactive metabolites derived from marine algae

(6×2=12 weightage)

### **Part C (Essay Type Questions)**

*Answer any **two** questions.*

*Weight 5 each.*

19. Discuss in detail marine microbial flora
20. Write an essay on alkalophiles and their adaptive mechanisms. Add a note on their industrial applications
21. Discuss the stages of biofouling and the role of microorganism in biofouling.
22. Explain the uses of biosensors in monitoring marine pollution and bioremediation.

(2×5=10 weightage)

