M.Sc DEGREE (CSS) SPECIAL REAPPEARANCE EXAMINATION, APRIL 2025

Third Semester

M.Sc MICROBIOLOGY

ELECTIVE - MG870301 - MARINE MICROBIOLOGY

2019 ADMISSION ONWARDS

EB627F91

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

*Weight **1** each.*

1. What is an Estuary? Give an account of Estuarine microbes.

2. What are methanogens?

3. What are applications of thermophiles?

4. Give a note on cold adapted microorganisms.

5. Which are the major pathogens causing marine microbial diseases?

6. Which are the common marine waterborne illnesses?

7. What is microbial induced corrosion?

8. What is meant by the term quorum sensing?

9. Name the major sources of marine natural products .

10. Identify anti-inflammatory agents from marine microbes .

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

*Weight **2** each.*

11. What are halophilic microorganisms? List some halophilic marine microflora.

12. List the characteristic features of Benthic zone with examples of microflora found in benthic zone.

13. Give an account of barophiles and their importance in biotechnology.

14. Discuss Aeromonas hydrophila as a marine pathogen.

15. What is biofouling in the marine environment and what are measures taken to control the bio fouling?

16. Discuss the application of bioremediation to clear oil spills marine system.

17. Describe biosensors. Write a note on application of marine biosensor.

18. Define biosurfactants .Explain its significance.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

*Weight **5** each.*

19. Describe in detail the different methods used for collection and estimation of marine microorganisms.

20. What are the strategies adopted by bacteria to overcome conditions of starvation?

21. Write an essay on marine pollution its sources, effects and control measures.

22. Discuss the sources and application of novel enzymes from marine microorganisms.

(2×5=10 weightage)