

**S.No. 3201**

**P 16 MBE 3 B**

(For candidates admitted from 2016-2017 onwards)

M.Sc. DEGREE EXAMINATION, NOVEMBER 2022.

Microbiology – Elective

**MARINE MICROBIOLOGY**

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20)

Answer ALL the questions.

1. Microbial endosymbionts
2. Epiphytes
3. Mangrove environment
4. Phosphate solubilizer
5. Barophiles
6. Bioremediation
7. Indicator micro organism
8. Water pollution
9. Beta-Carotene
10. Agar

SECTION B — (5 × 5 = 25)

Answer ALL the questions, choosing either (a) or (b)

11. (a) Write a note on coral microbial association.
- Or
- (b) Explain briefly about sponge microbial association.
12. (a) Write a short note on carbon cycle in the sea environment.
- Or
- (b) Discuss briefly about preservation methods of marine microbes.
13. (a) Explain briefly about adaptive mechanism in thermophiles.
- Or
- (b) Write a brief note on the role of microbial consortia in bioremediation of polluted marine sites.
14. (a) Discuss about the national standard adapted in sea food industries.
- Or
- (b) Write a short note on microbiology of processed fish products.

15. (a) Discuss briefly about the preservation methods for sea foods.

Or

- (b) Write a short note on marine microbial base and tumour agents.

SECTION C — (3 × 10 = 30)

Answer any THREE questions.

16. Give an account on microbial ecology of coastal and deep sea.
17. Discuss in detail about the marine microbial identification by conventional methods.
18. Give an account on bio fouling and their control.
19. Write in detail about diagnosis of contaminant in sea food and aquaculture products.
20. Give an account on quality control and regulations for microbial quality of sea foods.