QP Code: P25DRIS024

Reg. No : .....
Name : .....

ST MARY'S COLLEGE (AUTONOMOUS), THRISSUR-20

I SEMESTER (CBCSS - PG) DEGREE EXAMINATIONS, NOVEMBER 2025
(Regular/Improvement/Supplementary)
M. Sc. Microbiology
MBG1C03 : Environmental and Sanitation Microbiology
2024 Admission Onwards

Time: 3 Hours **Maximum Weightage: 30**

Part A

*Short answer type questions. Answer **any four**. Weightage **2** for each.*
(4x2 = 8 Weightage)

1. Describe the role of pioneer microorganisms in initiating primary succession.
2. Identify the source of airborn toxic pollutants.
3. Write a note on marine microflora.
4. Explain fixed dome type biogas plants.
5. Define antagonism.
6. Define ecological niche and mention it's features.
7. Compare and contrast the effectiveness of different air sanitation technologies in reducing air born bacterial loads in hospitals.

Part B

*Short essay-type questions. Answer **any four**. Weightage **3** for each.*
(4x3 = 12 Weightage)

8. Explain the Sulfur cycle with diagram.
9. Differentiate droplet,droplet nuclei and infectious dust.
10. Compare and contast the different types of secondary treatment processes.
11. Discuss in detail the general mechanism involved in bioleaching of Copper and Gold.
12. Briefly explain the Phosphorus cycle with diagram.
13. Evaluate the benifits of advanced methods of air sampling devices with examples.
14. Discuss in detail the causes and effects of Marine pollution.

Turn Over

Part C

*Essay-type questions. Answer **any two**. Weightage **5** for each.*
(2x5 = 10 Weightage)

15. Analyze the process of biodegradation of recalcitrant compounds, highlighting the microbial mechanisms involved and the factors that influence their degradation efficiency.
16. Identify the importance air sampling methods in monitoring the air quality and add a note of any five air samplers.
17. Discuss the methods to check the quality of drinking water.
18. Analyse the effectiveness of biosensors compared to conventional types.

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