

25P218

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Name:

Reg.No:

SECOND SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2026

(CBCSS - PG)

(Regular/Supplementary/Improvement)

CC19PESC2C08 - ENVIRONMENTAL MICROBIOLOGY AND BIOTECHNOLOGY

(Environmental Science)

(2019 Admission onwards)

Time : 3 Hours

Maximum : 30 Weightage

Part-A

Answer any *four* questions. Each question carries 2 weightage.

1. Describe Koch's postulates?
2. What are pure cultures, and why are they important?
3. What are thermophiles? Discuss their application in the field of science.
4. What is mycorrhizae and why is it important?
5. What are some of the beneficial traits that have been introduced into transgenic plants?
6. Discuss the advantages and disadvantages of constructed wetlands.
7. Why desulphurization of coal is needed?

(4 × 2 = 8 Weightage)

Part-B

Answer any *four* questions. Each question carries 3 weightage.

8. Which important bacterial pathogens can be transmitted by waters?
9. Discuss the main steps in a phosphorus cycle.
10. What is the scope of Environmental Biotechnology?
11. What is genetic engineering? Which all plants are used in genetic engineering?
12. Explain the advantages and disadvantages of using bioscrubbers for air pollution control?
13. What is ex situ bioremediation? Explain.
14. Discuss the advantages of biosensors for environmental analysis.

(4 × 3 = 12 Weightage)

Part-C

Answer any **two** questions. Each question carries 5 weightage.

15. What are the general characteristics of viruses?
16. What is biogeochemical cycling? Explain the role of microorganisms in biogeochemical cycling.
17. Discuss the application of biotechnology in petrochemical industry.
18. What are the effects of solid wastes on human and environment?

(2 × 5 = 10 Weightage)
