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Reg. No.....

Name.....

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, MAY 2024

Fourth Semester

Core Course—ENVIRONMENTAL MICROBIOLOGY

(For B.Sc. Microbiology)

[2013–2016 Admissions]

Time : Three Hours Maximum Marks : 80

Part A

Answer **all** *questions.*
Each question carries 1 *mark.*

Comment on the following :—

1. Clarifier.
2. Mesophiles.
3. Symbiotic bacteria.
4. Activated sludge.
5. Biogeochemical cycle.
6. An air borne disease.
7. Importance of aeration tank.
8. Name a bioremediator.
9. Chlorination.
10. Aerobic digestion.

(10 × 1 = 10)

Part B

Answer any **eight** *questions.*
Each question carries 2 *marks.*

Write about :

11. Bioventing.
12. Sedimentation tank.
13. Biosensors.
14. In situ bioremediation.
15. Bioaugmentation.
16. Importance of waste water treatment.
17. Biostimulation.
18. BOD and COD.

Turn over

19. Importance of bioremediation of marine oil spills.
20. Biological indicators.
21. Microbial leaching.
22. Trickling filter.

(8 × 2 = 16)

Part C

Answer any **six** *questions.*
Each question carries 4 *marks.*

23. Enumerate process of pesticide degradation by microbes.
24. Explain how bioreactors can be used for waste treatments.
25. Give an account of biodeterioration of industrial effluents from textile industry.
26. Explain the sampling methods of air.
27. Write about the fate of genetically engineered micro-organisms in environment.
28. Explain the significance of microbes in natural environment.
29. 'Paper and wood waste can be treated with microbes for reducing pollution.' Explain.
30. Explain phytoremediation and bioremediation.
31. Write an account on quantification techniques of air microbes.

(6 × 4 = 24)

Part D

Answer any **two** *questions.*
Each question carries 15 *marks.*

32. Write an account on waste water management.
33. What is aerobiology ? Explain the factors affecting extent and type of air microflora.
34. Explain how microbes can be used for mining and enhanced oil recovery.
35. Explain microbial ecology. Write about the adaptation of microbes in extreme conditions.

(2 × 15 = 30)