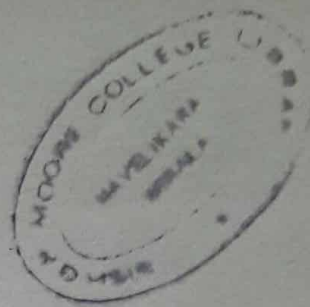


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L – 1868

Reg. No. :

Name :

Sixth Semester B.Sc. Degree Examination, March 2021

Career Related First Degree Programme under CBCSS

Group 2 (a) - Botany & Biotechnology

BB1672 - ENVIRONMENTAL BIOTECHNOLOGY

(2018 Admission Regular)

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer **all** questions in **a word** or **one or two** sentences. Each question carries **1** mark.

1. What are bioplastics?
2. Comment on lagooning.
3. Name any two water pollutants.
4. What is an effluent?
5. Name any test used for measuring the microbial quality of water.
6. What is biomass?
7. What are methanogenic bacteria?
8. Mention two advantages of vermicomposting over open composting.

P.T.O.

9. Comment on superbug.

10. Which organization standardizes the water quality parameters across nations?

(10 × 1 = 10 Marks)

SECTION – B

Answer any **eight** questions. **Each** question carries **2** marks. (Answer not to Exceed **One** Paragraph.)

11. What is landfilling?
12. What are ores? How can microbes contribute to their enrichment?
13. Mention the effects of fecal bacteria in potable water.
14. List out the common air pollutants and their effects.
15. Comment on the preparation of compost from organic wastes.
16. Comment on biosphere.
17. Comment on the fertilizer value of slurry.
18. Comment on the potential of Jojoba as an energy crop.
19. Does the organic load in aquatic systems affect the quality of water.
20. What are the potential applications of biomineralization?
21. How can environmental awareness be increased in the society?
22. What is COD?
23. What is bioaccumulation?
24. Comment on microbial degradation of pesticides.

- Can energy be produced from photosynthetic pigments? Comment.
5. Explain the laboratory techniques for detecting coliform bacteria in food.

(8 × 2 = 16 Marks)

SECTION – C

Answer any **six** questions. **Each** question carries **4** marks. (Answer not to exceed **120** words)

27. What is bioleaching?
28. Elaborate the effects of pathogenic bacteria from water on humans.
29. What is phytoremediation?
30. Comment on BOD.
31. Explain microbial hydrogen production.
32. How does industrial effluents affect the aquatic systems?
33. Comment on the prospects of vegetable oils as engine fuels.
34. Explain bioaugmentation.
35. What is the scope of environmental biotechnology with respect to economic aspects?
36. Explain the steps and process of biogas production.
37. Comment on the gasohol experiment.
38. How sludge can be disposed of?

(6 × 4 = 24 Marks)

SECTION – D

Answer any **two** questions. Each question carries **15** marks. (Answer not to exceed **three** pages)

39. Explain the treatment of solid wastes.
40. Detail the treatment methods of municipal wastes and hazardous industrial effluents.
41. Explain the application of microbes in production of fuels from biomas.
42. Explain various methods and protocols in bioremediation.
43. Explain in detail the environmental legislation laws.
44. What is pollution? Mention its types, sources and effects.

(2 × 15 = 30 Marks)