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N – 1599

Reg. No. :

Name :

Sixth Semester B.Sc. Degree Examination, April 2022
Career Related First Degree Programme under CBCSS
Group 2(a) Botany and Biotechnology
BB 1672 : ENVIRONMENTAL BIOTECHNOLOGY
(2019 Admission)

Time : 3 Hours

Max. Marks : 80

SECTION – A

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

1. Define environment.
2. What is mean by environmental degradation?
3. What are landfills?
4. Methanogens can act as an electron sink for anaerobic hosts. How?
5. What are energy crops?
6. Name any two Cyanobacteria that produce hydrogen.
7. What are superbugs?
8. Name an energy crop.
9. What is a smog?
10. Define bioleaching.

(10 × 1 = 10 Marks)

P.T.O.

SECTION – B

Answer any **eight** questions. **Each** question carries **2** marks. Answer not to exceed **one** paragraph

11. What are the components of environment?
12. Differentiate BOD from COD.
13. How fecal coliforms are different from that of non-fecal ones?
14. What is the advantage of gasohol?
15. What are the functions of photosynthetic pigments?
16. What are the different ways through which energy stored in biomass is released?
17. Comment on any two enzymes involved in hydrogen production in cyanobacteria.
18. Discuss the applications of bioaugmentation.
19. What are the different types of phytoremediation?
20. List the advantages and disadvantages of bioleaching.
21. Comment on sludge evaporation lagoon.
22. Brief a note on Indian Forest Act.
23. What is vermicast?
24. What is the composition of earth's atmosphere?
25. Write the key features of biosphere.
26. What is Roundup herbicide? What purpose it is commonly used for?

(8 × 2 = 16 Marks)

SECTION – C

Answer any **six** questions. **Each** question carries **4** marks. Short essay type)

27. Briefly mention scope and importance of environmental biotechnology.
28. How will you determine the microbial quality of water?
29. How hazardous industrial effluents are eliminated from drinking water?
30. Explain the process of biogas production.
31. Write an account on bioplastics.
32. How vegetable oils can be used for energy production?
33. Differentiate between bioaccumulation and biomineralisation.
34. How the environmental quality is assessed biologically?
35. What is composting? Explain its process.
36. What is water act? List out its salient points.
37. Explain the fundamentals of microbial hydrogen production. What are its applications?
38. Give an account on the composition and characteristics of lithosphere.

(6 × 4 = 24 Marks)

SECTION – D

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

39. What are the sources of environmental pollutants? How biotechnological interventions address this problem?
40. Explain the current methods employed for the detection and enumeration of coliform bacteria.

41. Discuss the use of microbes in the production of fuels from biomass.
42. Give an account on bioremediation and its importance.
43. Explain the technique of vermicomposting? Add a note on its importance.
44. Write a note on environmental protection act and its significance.

(2 × 15 = 30 Marks)
