



Reg. No. : .....

Name : .....

**Sixth Semester B.Sc. Degree Examination, April 2019  
(Career Related First Degree Programme under CBCSS)**

**Group 2(a) : Botany and Biotechnology**

**Vocational Course – XIII**

**BB 1672 : ENVIRONMENTAL BIOTECHNOLOGY**

**(2013 & 2014 Admissions)**

Time : 3 Hours

Max. Marks : 80

**SECTION – A**

Very short answer type. Maximum **two** sentences. Answer **all**. (10×1=10 Marks)

1. What is BOD ?
2. Give a diagrammatic representation of the nitrogen cycle.
3. What is bioflocculation ?
4. What is the trickling filter ?
5. What is the role of thermophilic bacteria in composting ?
6. What are the types of remediation ?
7. What are bioplastics ?
8. What is lagoon aeration system ?
9. What are xenobiotics ?
10. What is biosphere ?

**SECTION – B**

Short answers. Not to exceed **one** paragraph. Answer **any eight**. (8×2=16 Marks)

11. What are the effects of air pollution ?
12. What is solid waste ? What are its characteristics ?
13. Give an account of the microbes involved in bioremediation.
14. What is the mechanism of action of B.Thuringiensis as biopesticide ?
15. What are the non-renewable fuel sources ? Why are they called so ?

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16. How do microbes remediate oil spills ?
17. What is land farming and what are its applications ?
18. Discuss the role of viruses as biopesticides.
19. Give an account on nitrogen fixing bacteria.
20. How is methane produced by bacteria ?
21. How are biofertilizers an improvement on chemical fertilizers ?
22. What is gasohol ?

## SECTION - C

Short essay. **Not** to exceed **120** words. Answer **any six**.

(6×4=24 Marks)

23. Explain the effect of organic load in aquatic systems.
24. What is the EPA ? What are its guidelines ? How does it help protect the environment ?
25. Give a brief account on the importance of microbial hydrogen production.
26. What is the green house effect ? How has this affected global climate ?
27. Write briefly on the tertiary treatment systems for waste water treatment.
28. Discuss the role of algae in solving the energy crisis.
29. What are hazardous wastes ? How are they treated ?
30. Give an account of the treatment processes for industrial waste.
31. Explain 'climate change' and how it has impacted human life and will do so in future.

## SECTION - D

Long essay. Answer **any two** questions.

(2×15=30 Marks)

32. What is biodiversity ? What are the factors that impact biodiversity ?
  33. Discuss the environmental impact of over exploitation of both renewable and non renewable energy sources.
  34. Discuss the role of microorganisms in degradation of pesticides, herbicides and other toxic chemicals.
  35. Write an essay on the application of microbes in production of fuels from biomass.
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