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Reg. No..... 1738

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B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, MARCH 2018

Sixth Semester

Core Course 21 – ENVIRONMENTAL BIOTECHNOLOGY

(For B.Sc. Biotechnology)

[2013 Admission onwards]

Time : Three Hours

Maximum Marks : 80

Part A

Answer **all** the questions.

1 mark each.

1. What is sludge treatment?
2. What is Bioaugmentation?
3. Define Pollution.
4. Name an algae used for sewage treatment.
5. What are nif genes?
6. Volatile compounds often pollute _____.
7. Define Bioleaching.
8. What is gasohol?
9. What are xenobiotics?
10. What are photoautotrophs?

(10 × 1 = 10)

Part B

Answer any **eight** of the following.

2 marks each.

11. Give the principle of Methanogenesis.
12. What is coagulation?
13. List out any *two* adulterants in food.
14. How does ozone layer deplete?
15. Name a toxic chemical and discuss how biological agents could be used for its remediation.
16. What are biofertilizers? Cite one example.

Turn over

17. What are the general characteristics of community waste?
18. Why is *Bacillus thurigiensis* used as a pesticide?
19. What is anaerobic waste treatment?
20. Define Bioremediation.
21. What is an artificial leaf?
22. How is lignin degraded in nature?

(8 × 2 = 16)

Part C

Answer any six of the following.

4 marks each.

23. Write a brief note on the various hazards from wastes and pollutants.
24. What is insitu bioremediation?
25. Write a note on biogas production.
26. How is the organic load in aquatic systems estimated?
27. What are the major sources of water pollution?
28. How does carbon fixation happen in nature?
29. Describe the characteristics of waste water.
30. Explain the various approaches for solid waste management.
31. What is the use of Chlorination?

(6 × 4 = 24)

Part D

Answer any two of the following.

15 marks each.

32. Write an essay on various methods of waste water treatment.
33. How are the pollutants classified? Explain with appropriate examples.
34. What are the methods used for biodegradation of organic compounds?
35. What is environmental biotechnology? Elaborate on the areas covered under the subject. Discuss the significance of the subject in the present day concern about the degradation of our environment.

(2 × 15 = 30)