

Reg. No .....

Name .....

24U507

**B.Sc. DEGREE END SEMESTER EXAMINATION - OCTOBER 2024**

**SEMESTER 5 : CHEMISTRY**

**COURSE : 19U5CRCHE05 : ENVIRONMENTAL STUDIES**

*(For Regular 2022 Admission and Supplementary 2021/ 2020 / 2019 Admissions)*

Time : Three Hours

Max. Marks: 75

**PART A**

**Answer any 10 (1 mark each)**

1. What is the primary function of an Ecosystem?
2. The general antidote for arsenic poisoning is.....
3. What are the main objectives of Water Pollution Act?
4. Give an example for a biodegradable buider used in detergents.
5. What is the final product formed in the disintegration of  ${}_{90}\text{Th}^{232}$ ?
6. Give any two types of Natural Ecosystem.
7. What are primary consumers?
8. What is CBCP and SBCP?
9. What is meant by top down and bottom up approach?
10. Explain Contour Farming?
11. Name the members of biotic components of an Ecosystem.
12. ----- predicts that the economic and environmental refugees will make up a major percentage of refugee population around the world.
13. What are the objectives of Water shed Management?

**(1 x 10 = 10)**

**PART B**

**Answer any 10 (2 marks each)**

14. Explain spallation reactions.
15. What is Eutrophication?
16. Give the problems related to resettlement of people?
17. What are the major benefits of Dams?
18. What are Autotrophs and Heterotrophs?
19. How is DO in water expressed? What happens when DO falls very low?
20. What are fast-breeder reactors?
21. Comment on the toxic effects of organomercurials.
22. Cite any two problems related to the resettlement of people.
23. What is Terrestrial ecosystem? Give any two examples.
24. Expand PAN. What are its toxic effects?
25. Green Chemistry is important in safer chemistry for accident prevention. Explain.
26. Write a note on Floods.

**(2 x 10 = 20)**

### **PART C**

**Answer any 5 (5 marks each)**

27. Discuss the advantages of GM crops?
28. Discuss the significance of Food chains and Food webs.
29. Explain the properties of fullerene. How are fullerenes used in nanotechnology?
30. What are the twelve principles of green chemistry?
31. Write briefly on the impact of toxic chemicals on enzymes.
32. Explain Soil erosion.
33. Write a note about issues involved in enforcement of Environmental Legislation.
34. Explain how nuclear stability is related with a) n/p ratio and b) Binding energy.

**(5 x 5 = 25)**

### **PART D**

**Answer any 2 (10 marks each)**

35. Elaborate on the role of mineral resources in a healthy environment. How are they exploited? Explain the drastic effects of extraction of mineral resources?
36. Discuss sol-gel and chemical vapour deposition methods for nanoparticle synthesis.
37. Discuss the method to find BOD and COD in water sample.
38. Discuss in detail any two applications of radioactivity.

**(10 x 2 = 20)**