

Reg. No

Name

25U531

B. Sc. DEGREE END SEMESTER EXAMINATION - OCTOBER 2025

SEMESTER 5 : CHEMISTRY

COURSE : 19U5CRCHE05 : ENVIRONMENTAL STUDIES

(For Regular 2023 Admission and Supplementary 2022/ 2021/ 2020/ 2019 Admissions)

Time : Three Hours

Max. Marks: 75

PART A

Answer any 10 (1 mark each)

1. What are the objectives of Water shed Management?
2. ----- and -----minimizes soil erosion
3. Name the members of biotic components of an Ecosystem.
4. Noise level is expressed in.....units.
5. Draw the structure of DDT.
6. What are secondary consumers?
7. How radioactive carbon C^{14} is generated in atmosphere?
8. Write two remedies for Water Logging?
9. What are pits?
10. What is a food web?
11. Define fullerene.
12. ----- predicts that the economic and environmental refugees will make up a major percentage of refugee population around the world.
13. Give any two types of Natural Ecosystem.

(1 x 10 = 10)

PART B

Answer any 10 (2 marks each)

14. What are the important biochemical effects of oxides of nitrogen.
15. What are the major benefits of Dams?
16. What are the matters dealt in the Wildlife Protection policy?
17. What are the threats of CO_2 pollution?
18. List out two factors affecting watersheds.
19. What is photochemical smog.
20. How many alpha and beta particles are emitted in all when U^{238} decays to Pb^{206} ?
21. What are biotic and abiotic components of an Ecosystem?
22. What are metalloenzymes? Give an example.
23. What are Ecological pyramids?
24. Explain alpha decay with an example.
25. How can we manage Droughts?
26. Explain the principle of less hazardous chemical syntheses with an example.

(2 x 10 = 20)

PART C

Answer any 5 (5 marks each)

27. What is atom economy? Calculate the atom economy for making hydrogen from the following reaction; $\text{CH}_4(\text{g}) + \text{H}_2\text{O}(\text{g}) \rightarrow 3\text{H}_2(\text{g}) + \text{CO}(\text{g})$
28. Explain the consequences of timber extraction.
29. What is greenhouse effect? Name two greenhouse gases. How is it related to global warming?
30. Discuss in detail the classification of consumers with examples.
31. Discuss the sources of toxic elements in water with suitable examples.
32. Construction of dams has a detrimental effect on forest resources and tribal people. Justify the Statement.
33. Write a short note on Radio-active disintegration series.
34. Discuss the reduction technique for nanoparticle synthesis.

(5 x 5 = 25)

PART D

Answer any 2 (10 marks each)

35. Write a note about Alternate Energy resources.
36. Discuss sol-gel and chemical vapour deposition methods for nanoparticle synthesis.
37. Write notes on soil pollution. What are the effects of soil pollutants?
38. Explain in detail the principle behind a) Radiocarbon dating and b) Rock dating.

(10 x 2 = 20)