

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, MARCH/APRIL 2012**Sixth Semester****Choice Based Core Course – ENVIRONMENTAL CHEMISTRY**

(Common for B.Sc. Chemistry Model I, Model II, B.Sc. Petrochemicals and
B.Sc. Chemistry Environment and Water Management)

Time : Three Hours

Maximum Weight : 25

Section A*Answer all questions.**Each bunch of four questions carries a weight of 1.*

- I. 1. Noise level is expressed in _____ units.
2. Chernobyl disaster occurred in the year _____.
3. Bhopal disaster is due to _____ chemicals.
4. Eutrophication is _____.
- II. 5. One Bio degradable pesticide is _____.
6. pH range for drinking water is _____.
7. Itai-Itai disease is caused by _____ metal poisoning.
8. Presence of chloride in water is detected by treating water with _____ solution.
- III. 9. Radiation pollution causes _____ disease.
10. Name any *two* most toxic heavy metal ions causing water pollution.
11. Bio accumulation is _____.
12. Reverse osmosis is used for _____.
- IV. 13. Dissolved oxygen is expressed as _____.
14. Biotic components in the environment consist of _____.
15. _____ is an oxidising smog.
16. Sulphate in water is tested by acidifying water with HCl and then treating it with _____ solution.

(4 × 1 = 4)

Turn over

Section B

Answer any five questions.

Each question carries a weight of 1.

17. What is SPM? What are its sources?
18. What are primary air pollutants?
19. What do you mean by Green house effect?
20. Differentiate between COD and BOD.
21. What do you mean by ISO-14001? Explain.
22. What is Bio magnification? What are its consequences?
23. Differentiate between Pollution and Contamination.
24. What is meant by Cation exchange capacity of soil?

(5 × 1 = 5)

Section C

Answer any four questions.

Each question carries a weight of 2.

25. Explain the various steps involved in the treatment of waste water.
26. Write briefly on Non-conventional energy sources.
27. Discuss briefly on pollution of air by oxides of Carbon and Sulphur. Explain the control measures to be taken to reduce this. What are the health problems associated with it?
28. What are the factors responsible for ozone depletion?
29. Describe the causes and adverse effect of acid rain.
30. Write a note on radiation pollution, its sources and impact on the Environment.

(4 × 2 = 8)

Section D

Answer any two questions.

Each question carries a weight of 4.

31. Describe the methods used for the estimation of the following water quality parameters :
 - (a) BOD.
 - (b) Fluoride.
 - (c) Lead.
 - (d) Coliform.
32. Write briefly on sampling procedures and analysis of soil normally done for Kerala type Agriculture.
33. Discuss briefly on sources and bio-chemical effects of Arsenic Pesticides PAN and oxides of Nitrogen Pollution.

(2 × 4 = 8)