

**B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, MARCH 2016****Sixth Semester****Choice based Core Course—ENVIRONMENTAL CHEMISTRY**

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

[2013 Admissions]

Time : Three Hours

Maximum : 80 Marks

**Part A**

*Answer all questions.  
Each question carries 1 mark.*

1. What do you mean by ISO-14001 ?
2. Suggest an antidote for Mercury.
3. Give the expansion of EPA.
4. Give two examples for indoor air pollutants.
5. What is SPM ?
6. What is eutrophication ?
7. Define lime requirement.
8. Give an example for soil micronutrient.
9. What is the pH of sea water ?
10. Which region of the soil has maximum biological activity ?

(10 × 1 = 10)

**Part B**

*Answer any eight questions.  
Each question carries 2 marks.*

11. What are the disadvantages of hydrogen as a fuel ?
12. Explain the harmful effects of lead pollution.
13. Write notes on effect of electric and magnetic field on environment.
14. Discuss the important man-made sources of radioactive pollution.
15. Describe the air quality standards in air.
16. Discuss briefly the BOD determination of a sample of water.

**Turn over**

17. Describe various techniques for waste water treatment.
18. Explain the biochemical effects of Arsenic and Cadmium.
19. What is mean by phytoremediation ?
20. What is cation exchange capacity ? How will you measure it ?
21. What are the different methods used for controlling soil pH ?
22. Describe the water quality index and water quality standards.

(8 × 2 = 16)

### Part C

*Answer any six questions.  
Each question carries 4 marks.*

23. Briefly discuss about solar energy. Mention its benefits and limitations.
24. Explain with examples, the effects of toxic chemicals on enzyme.
25. Discuss the causes and effects of acid rain.
26. Explain briefly about soil horizon.
27. Comment on the environment degradation of Kuttanad wetland.
28. Discuss briefly on solid waste management.
29. What are the different methods used to estimate N and P present in the soil ?
30. What are the factors responsible for ozone depletion ?
31. What is biomagnification ? What are its consequences ?

(6 × 4 = 24)

### Part D

*Answer any two questions.  
Each question carries 15 marks.*

32. What are the concepts and principles involved in the environmental planning ?
33. (a) Briefly explain the biochemical effects of pesticide with suitable examples.  
(b) What are green house gases ? How can we reduce green house effect ?
34. (a) Define noise pollution. Give its classification, hazards and preventive measures.  
(b) Write a note on Bhopal tragedy.
35. Describe a method each for the estimation of the following in water sample : Cyanide, Ammonia, Nitrate, Nitrite and Phosphate.

(2 × 15 = 30)