

TB145130C

Reg. No.....

Name.....

**B. Sc. DEGREE. (C.B.C.S.S.) EXAMINATION, OCTOBER 2016**  
**SEMESTER V - OPEN COURSE (CHEMISTRY)**  
**CHE5EC(O) – ENVIRONMENTAL CHEMISTRY**

**Time: Three Hours**

**Maximum Marks: 80**

**PART A**

**Short answer questions**

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

1. .... is World Environment Day.
2. Noise level is expressed in -----unit.
3. Itai-Itai disease is caused by -----metal poisoning.
4. Name an antidote for cyanide poisoning.
5. Reverse osmosis is used for -----.
6. Alum is chemically known as-----.
7. The plant ----- removes the dangerous effects of toluene xylene and benzene.
8. Define effluent.
9. Leaf Necrosis is due to -----.
10. Define 'Lime requirement'.

**(10×1=10)**

**PART B**

**Brief answer questions**

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

11. What is photochemical smog?
12. Differentiate between bioaccumulation and biomagnifications.
13. What are carcinogens? Give examples.
14. Differentiate pollutant and contaminant.
15. What are non ionic surfactant?
16. What are builders? Give an example.
17. What is Love canal incident?
18. What are wet scrubbers?
19. Explain Phytoremediation.
20. Write a note on electrostatic precipitator.
21. What are humic substances? What are the decomposition products of humic acid?
22. Explain cation exchange capacity of soil.

**(8×2=16)**

**PART C**

**Short essay questions**

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

23. Write briefly on Bhopal Disaster.
24. Briefly explain biochemical effects of oxides of sulphur.
25. Explain the biochemical effects of As and Cd.

26. Define EMS. What are its benefits.
27. Discuss BOD determination of water sample.
28. Describe briefly ultra filtration technique for the purification of waste water.
29. Distinguish between industrial and municipal wastes
30. Discuss the methods for management for hazardous wastes.
31. Write briefly on soil analysis techniques.

**(6×4=24)**

#### **PART D**

##### **Long essay type questions**

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

32. What is acid rain? Explain its formation, adverse effect and control measures.
33. Discuss different type of water Pollution. What are the major source
34. Write an essay on the different methods used in purification of waste water.
35. (a) List the principles of green chemistry.  
(b) Comment on the environmental degradation of Kuttanadu wet land.

**(2×15 =30)**