

**M.SC DEGREE I SEMESTER EXAMINATION IN
ENVIRONMENTAL TECHNOLOGY
DECEMBER 2004**

ENB 2102 CHEMISTRY OF THE ENVIRONMENT

Time : 3 Hours

Maximum Marks: 50

PART - A

(Answer **ANY FIVE** questions)

(All questions carry **EQUAL** marks)

(5 x 2 = 10)

- I.
 1. What is the role of ozone in atmospheric processes?
 2. Explain how the soil functions as sink for toxic metal ions.
 3. What are the natural organic compounds in water?
 4. Explain the role which bacteria play in increasing the toxicity of pollutant mercury.
 5. What do you mean by nuclear proliferation?
 6. Explain the nature of detergent pollution.

PART - B

(Answer **ANY FIVE** questions)

(All questions carry **EQUAL** marks)

(5 x 3 = 15)

- II. What is a photochemical smog? What are the conditions for the formation of smog?
- III. Explain the importance of layer silicate minerals in soil.
- IV. Write a note on the biological and chemical role of dissolved oxygen.
- V. Describe the role of organisms in the nitrogen cycle.
- VI. Write a note on the interaction of radiation with matter.
- VII. Discuss the application of synthetic polymers in waste treatment and disposal.

(Turn Over)

PART - C(Answer **ANY FIVE** questions)(All questions carry **EQUAL** marks)

(5 x 5 = 25)

- VIII. What are green house gases? Account for global warming in terms of the changing concentration of green house gases in the environment.
- IX. Write a note on chemical processes in soil.
- X. Discuss the distribution of predominant species formed by carbon dioxide dissolved in water.
- XI. What are the main features of the carbon cycle? Describe how oxygen cycle is closely related to the carbon cycle?
- XII. Write a brief account on the peaceful applications of nuclear radiation.
- XIII. What is meant by eutrophication? What are the causes for eutrophication? How can we halt eutrophication?