

**M.Sc. DEGREE I SEMESTER EXAMINATION IN ENVIRONMENTAL TECHNOLOGY
NOVEMBER 2010**

ENV/ENB 2102

CHEMISTRY OF THE ENVIRONMENT

Time: 3 Hours

Maximum Marks : 50

PART - A

(Answer **ANY FIVE** questions)
(All questions carry **EQUAL** marks)

(5x 2 =10)

- I. (a) What is the chemical composition of air?
 (b) What are heavy metal pollutants of water?
 (c) Define the term 'geosphere'.
 (d) What is the principle of gravimetry?
 (e) Outline the causes of permanent hardness of water.
 (f) How acid rain is formed?

PART - B

(Answer **ANY FIVE** questions)
(All questions carry **EQUAL** marks)

(5 x 3 = 15)

- II. (a) What are the sources of carbon monoxide in air?
 (b) How is photochemical smog is formed in atmosphere?
 (c) What are BOD and COD?
 (d) Write down the biogeochemical cycle of carbon.
 (e) What is the principle involved in the determination of metals by Atomic Absorption Spectrophotometry?
 (f) What is the purpose of pretreatment of water?

PART - C

(Answer **ANY FIVE** questions)
(All questions carry **EQUAL** marks)

(5 x5= 25)

- III. (a) What are the causes of ozone depletion? Explain its consequences.
 (b) Explain the pollution of water by organic compounds.
 (c) Write a note on physico-chemical properties of soil.
 (d) How will you determine the turbidity of water?
 (e) Explain the principle and applications of:
 (i) Gas chromatography
 (ii) X-ray fluorescence
 (f) How pH, cation exchange capacity and metal ions of soils are determined?