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M.Sc. DEGREE II SEMESTER EXAMINATION IN
ENVIRONMENTAL TECHNOLOGY
JUNE 2003

ENV2201 CHEMICAL METHODS IN ENVIRONMENTAL ANALYSIS

Time : 3 Hours Maximum Marks:50

PART-A

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

(5 x 2 = 10)

I. (1) What do you mean by Standard Hydrogen Electrode?
(2) Explain Beer Lambert's Law.
(3) Outline the principle of flame photometry.
(4) What are the units in which radioactivity is expressed?
(5) Explain the method of collection of air samples.
(6) Outline the causes of permanent hardness of water.

PART-B

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

(5 x 3 = 15)

II. How pH of a solution determined electrometrically?

III. Discuss optical design of a filter photometer.

IV. Outline the principles involved in the determination of metals by Atomic Absorption Spectrophotometry.

V. Discuss the working of a G.M.Counter.

VI. Explain how alkalinity of water sample is determined.

VII. Explain a method to determine the amount of SPM of an air sample.

(Turn Over)

PART -C

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

(5 x 5 = 25)

VIII. (i) What do you mean by reference electrode?
(ii) What are the conventions used in potential measurements?

IX. How do you determine turbidity of water?

X. What are the limitations of AAS and FP?

XI. Explain briefly on γ - ray spectrometry.

XII. (i) How air samples are preserved?
(ii) Explain one method for the determination of sulphur in air samples.

XIII. Explain how BOD and COD of a water sample determined.

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