M.Sc. DEGREE II SEMESTER EXAMINATION IN ENVIRONMENTAL TECHNOLOGY, MAY 2007

ENB 2202 ENVIRONMENTAL ENGINEERING

Time : 3 Hrs. Maximum marks : 50

PART - A

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

(5 x 2 = 10)

I. (a) Write the significance and permissible limits of the following parameters in water used for drinking
(i) Fluorides (ii) Hardness

(b) What is adsorption ? Write the factors that influence adsorption process.

(c) Distinguish between attached growth systems and suspended growth systems in biological treatment.

(d) Mention the meteorological factors that affect dispersion of pollutants.

(e) What are the basic mechanisms by which particulates get removed in control devices?

(f) What are the gases found in land fills?

PART - B

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

(5 x 3 = 15)

II. Explain briefly the bacteriological examination of water.

III. Explain the significance of overflow rate in the design of settling tanks.

IV. Write the sources and effects on human by the following air pollutants:
(i) oxides of sulphur (ii) Particulates

V. Briefly explain control of vehicular pollution.

VI. What are the different measures by which noise is controlled in an industry?

VII. With a flow diagram explain activated sludge process.

PART - C

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

(5 x 5 = 25)

VIII What is membrane filter technique? What are its advantages over MPN method?

IX. Design rapid sand filter for a community of 150 persons. (Assume suitable data required)

X. Derive the expression for effluent microorganism concentration for a continuous-flow stirred tank reactor without recycle.

XI What is Gaussian dispersion model? What are the assumptions made in the formulation of the model?

XII. What are the different methods of combustion for control of gaseous air pollutants? Explain briefly.

XIII. Explain different methods of solid waste disposal.

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