Exam.Code:0004
Sub. Code: 0375

1058

B.A./B.Sc. (General) Fourth Semester
Industrial Chemistry
Paper – B: Pollution

Time allowed: 3 Hours Max. Marks: 75

NOTE: *Attempt five questions in all, including Question No. I which is compulsory and selecting one question from each Unit.*

x-x-x

I. Attempt the following:-

a) Depict diagrammatically carbon cycle.

b) What are the major water pollutants and their sources?

c) What is radioactivity? What are the sources of radioactivity?

d) What are wet collectors?

e) Define term BOD.

f) Classify solid waste.

g) What is gauge pressure?

h) Name the device that measures small temperature changes.

i) Define range and accuracy.

j) What is Thomson effect? (10x1½)

UNIT – I

II. a) What environmental factors will influence future growths of population in India? Explain.

b) What are the sources and causes of air pollution? (7,8)

III. a) Define biotic and abiotic components and give their classification. Explain nitrogen cycle in detail.

b) What are the consequences of green house effect and global warming? How we can control CO_2 pollution and global warming? (7,8)

UNIT – II

IV. a) Explain aerobic decomposition and anaerobic decomposition of sewage.

b) What are wet collectors? Describe the construction and working of a spray tower. (8,7)

P.T.O.

V. a) Draw the flow diagram of activated sludge process and explain the basic operation involved in the process.

b) Explain the working of electrostatic precipitator with the help of diagram. (7,8)

UNIT – III

VI. a) State the construction and working principle of gas chromatograph.

b) Give the three methods for processing of wastes before the ultimate disposal. (8,7)

VII. a) Describe thermogravimetric analysis in detail.

b) What is landscape pollution? Give the sources and classification of landscape pollution. (8,7)

UNIT – IV

VIII. Explain the construction and working of following:-

a) Bimetallic thermometer

b) Pirani gauge (15)

IX. Describe the construction, working and theory of a bubbler system for measurement of liquid level. List their advantages and disadvantages. (15)

x-x-x