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Seventh Semester B.E. Degree Examination, June/July 2023

Air Pollution and Control

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Definition of Air Pollution. Explain the various source of air pollution. (10 Marks)
- b. Describe the general mechanisms by which air pollution effects the materials. (10 Marks)

OR

- 2 a. Explain the basic theory of formation of photochemical smog with reactions. (10 Marks)
- b. List out the types of Inversion and explain them. (10 Marks)

Module-2

- 3 a. With the aid of graphical representation, explain different types of stability conditions of atmosphere. (10 Marks)
- b. With neat sketch, explain the various types of plume behaviour. (10 Marks)

OR

- 4 a. Explain terms : i) Temperature lapse ii) Wind velocity iii) Turbulence
iv) Wind Rose v) Wind direction. (10 Marks)
- b. Write a note on measurement of the meteorological variables. (10 Marks)

Module-3

- 5 a. Explain the principles of sampling the gaseous air pollutants. (10 Marks)
- b. Give step by step flow chart for the analysis of SO_x and NO_x. (10 Marks)

OR

- 6 a. What is indoor air pollution? What are the precautions measures to be taken to overcome this? (10 Marks)
- b. With aid of neat sketch, explain High volume air sampler. (10 Marks)

Module-4

- 7 a. Explain with neat sketch construction, working of ESP. (10 Marks)
- b. Explain the construction of setting chambers. (10 Marks)

OR

- 8 a. Give the advantages and disadvantages of wet Scrubbers. (10 Marks)
- b. Examine the operation problems encountered in fibric filter. Mention factor affecting the efficiency of fabric filter. (10 Marks)

Module-5

- 9 a. Give the salient features of environment protection Act, 1986. (10 Marks)
- b. Illustrate the case of Bhopal gas tragedy and its effects. (10 Marks)

OR

- 10 a. Define Noise Pollution. Explain sources and control measures of Noise Pollution. (10 Marks)
- b. Distinguish between Montreal Protocol and Kyoto protocol. (10 Marks)