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**Seventh Semester B.E. Degree Examination, June/July 2018**  
**Air Pollution and Control**

Time: 3 hrs.

Max. Marks:100

**Note: 1. Answer FIVE full questions, selecting at least TWO questions from each part.**

**2. Substantiate answers with sketches wherever necessary**

**PART – A**

- 1 a. Define 'Air pollution' and tabulate the major and minor constituents of dry clean atmospheric air. (05 Marks)
- b. Explain the basic theory of formation of photo chemical smog with necessary reactions and examples, what are the factors affecting the photo chemical reactions. (10 Marks)
- c. What is Air Pollution (emission) inventory why it is necessary? (05 Marks)
- 2 a. Write the units used for measurement of air pollutants. (02 Marks)
- b. Write an explanatory note on any one Indian air pollution episode. (06 Marks)
- c. With a sketch, discuss the structure of the atmosphere (06 Marks)
- d. Explain the terms : i) Aerosols ii) Smoke iii) Mist iv) Fumes (06 Marks)
- 3 a. What is Inversion? Discuss briefly the different types of inversion. (08 Marks)
- b. With neat sketch, explain the various types of plume behavior. (08 Marks)
- c. Write Explanatory note on Fixed Box models and Infinite line source models. (04 Marks)
- 4 a. Describe briefly various equations used in predicting noise levels. (06 Marks)
- b. Define noise pollution. Explain sources and control measures of noise pollution. (08 Marks)
- c. What are the factors to be considered for industrial plant location based on environmental considerations? (6 Marks)

**PART – B**

- 5 a. What is meant by "Sampling train"? With neat sketches, explain the isokinetic stack sampling for particulates. (08 Marks)
- b. Discuss the various methods of atmospheric sampling. (08 Marks)
- c. Explain the adsorption process to control gaseous emissions. (04 Marks)
- 6 a. What are the methods used for the control of gaseous pollutants? Explain any two in detail. (10 Marks)
- b. List the various methods of odor control, explain any two in detail. (10 Marks)
- 7 a. What is indoor air pollution? What are the precautionary measures to be taken to overcome this? (10 Marks)
- b. Write an explanatory note on : (10 Marks)
  - i) Ambient Air quality standards
  - ii) Global warming and control measures.
- 8 a. Discuss on the salient features of environment (protection) Act, 1986. (10 Marks)
- b. What is meant by acid rain? How is it caused? Discuss on the effects of the same on surface water. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.