

# CBCS SCHEME

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15CV551

Fifth Semester B.E. Degree Examination, Jan./Feb. 2023

## Air Pollution and Control

Time: 3 hrs.

Max. Marks: 80

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

### Module-1

- 1 a. Briefly explain primary and secondary pollutant with example. (08 Marks)  
b. Explain the various effects of air pollution on human beings. (08 Marks)

OR

- 2 a. Briefly explain photo-chemical smog and coal induced smog. (08 Marks)  
b. Enumerate the effect of air pollution on materials and plants. (08 Marks)

### Module-2

- 3 a. List the meteorological parameter that influence the dispersion of pollutants in atmosphere. (08 Marks)  
b. Briefly explain: i) Wind rose diagram ii) Estimation of stack height. (08 Marks)

OR

- 4 a. With the help of neat sketch explain different types of plumes depending upon their environmental condition (any four). (08 Marks)  
b. With usual notations, explain Gaussian dispersion model. (08 Marks)

### Module-3

- 5 a. List methods of sampling suspended particulate matter. Explain any one method in detail sketch. (08 Marks)  
b. Mention different chemical methods for analysis of air pollutant. Explain any one method in brief. (08 Marks)

OR

- 6 a. With neat sketch, describe the methods of gaseous sampling by sample train. (08 Marks)  
b. Enumerate the various method for analysis of air sample by instrumental method. Explain any one method to analysis SO<sub>x</sub>. (08 Marks)

### Module-4

- 7 a. Explain with a neat sketch the principle and working of fabric filter. Give the application. (08 Marks)  
b. What are the advantages and disadvantages of electrostatic precipitator? (08 Marks)

OR

- 8 a. With a neat sketch, explain the principle construction and working of a cyclone separator. (08 Marks)  
b. What are the advantages and disadvantages of venture scrubbers? (08 Marks)

### Module-5

- 9 a. Define Noise. Discuss various sources of Noise. (08 Marks)  
b. Briefly explain control methods of automobile pollution. (08 Marks)

OR

- 10 a. Briefly discuss the various controlling methods of Noise pollution. (08 Marks)  
b. Briefly discuss the any two global episodes due to air pollution. (08 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.