

# CBCS SCHEME

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15CV551

Fifth Semester B.E. Degree Examination, June/July 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. Define Air Pollution and differentiate between Natural and Man – made Air Pollutions. (08 Marks)
- b. Explain the different major Air Pollutants their characteristics and major Health effects on Human beings. (08 Marks)

OR

- 2 a. What is Photochemical Smog and how it effects on Human beings and Plants. (08 Marks)
- b. Discuss the effects of Air pollution on Materials and Vegetation. (08 Marks)

### Module-2

- 3 a. What are the factors will influence the dispersion of Air pollutants? Explain briefly. (08 Marks)
- b. Explain the different types of Plume Behaviour. (08 Marks)

OR

- 4 a. Explain the Gaussian dispersion model for predicting concentrations of Air Pollutants originating from a point source. (08 Marks)
- b. Explain the parameters which are to be considered during the design of stack height and effective mixing depths. (08 Marks)

### Module-3

- 5 a. Explain the different methods of sampling of particulate and Gaseous Air Pollutants from Atmosphere. (08 Marks)
- b. Briefly explain the sampling devices used to conduct sampling. (08 Marks)

OR

- 6 a. What points to be considered while selecting sampling location site? (08 Marks)
- b. Explain the data to be collected while doing stack monitoring and Analysis of Air Pollutants. (08 Marks)

### Module-4

- 7 a. Discuss the objectives of using Control Equipments in controlling Gaseous Pollutants. (08 Marks)
- b. Explain with a neat sketch the principle and working of :  
i) Cyclones separator ii) Electro static - preceptors. (08 Marks)

OR

- 8 a. Explain with a neat sketch any two types of scrubbers used for Control particulate and Air pollution. (08 Marks)
- b. Explain the methods of Control Gaseous pollutants from Industries. (08 Marks)

**Module-5**

- 9 a. Discuss the Air Pollution caused by Automobiles. (08 Marks)  
b. What are the various approaches to minimize Exhaust Emission? Explain briefly. (08 Marks)

**OR**

- 10 a. Explain the Standard Noise levels and their Specifies Indian Standards. (08 Marks)  
b. Discuss the Environmental Impacts of Mining and Thermal Power Plants. Briefly explain. (08 Marks)

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