



CBCS SCHEME

15CV551

Fifth Semester B.E. Degree Examination, July/August 2021 Air Pollution and Control

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions.

- 1 a. Define Air Pollution. Explain Primary and Secondary Air Pollutants with examples. (08 Marks)
b. Briefly explain the effects of Air pollution on Human health and Plants. (08 Marks)
- 2 a. What is Inversion? Explain in brief Radiation Inversion, Advection Inversion and Subsidence Inversion. (08 Marks)
b. Explain the effects of Photochemical Smog on Environment. (08 Marks)
- 3 a. Explain the Meteorological parameters to be considered in Air pollution. (08 Marks)
b. Write a note on :
i) Wind rose diagram ii) Maximum mixing depth. (08 Marks)
- 4 a. Explain with neat sketches, how different atmospheric conditions give rise to different kinds of plumes. (08 Marks)
b. Explain briefly the Gaussian dispersion model, with a sketch. (08 Marks)
- 5 a. With a help of neat sketch, explain high volume air samples for measurement of particulate matter. (08 Marks)
b. Enumerate the various Analytical methods available for monitoring Air pollution. (08 Marks)
- 6 a. With a neat sketch, explain Sampling train for Stack monitoring. (08 Marks)
b. With a neat sketch, explain Analysis of Carbon monoxide using Non – dispersive Infrared Analyser. (08 Marks)
- 7 a. With a neat sketch, explain the principle and operation of an Electrostatic precipitator. (08 Marks)
b. Explain in brief the Corona formation in an ESP. (08 Marks)
- 8 a. Explain with a neat sketch, the principle and construction of fabric filter. Also give its applications. (08 Marks)
b. With a neat sketch, explain the Working of a Venturi Scrubber. (08 Marks)
- 9 a. Briefly explain methods used to minimize the Automobile exhaust emission. (08 Marks)
b. Define Acid rain. How is it caused? Explain Control methods. (08 Marks)
- 10 a. Define Noise Pollution. Explain the sources and effects of Noise pollution. (08 Marks)
b. Write a note on :
i) Bhopal gas tragedy ii) Chernobyl Nuclear disaster. (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.