PCET LIBRARY BANGALORE-49

CBCS SCHEME

USN | | | | | | | | | | |

21CV744

Seventh Semester B.E./B.Tech. Degree Examination, June/July 2026
Air Pollution and Control

Time: 3 hrs. Max. Marks: 100

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

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.

Module-1

1 a. Define air pollution and briefly explain the various sources of air pollution. **(10 Marks)**

b. Explain the classification and properties of air pollutants. **(10 Marks)**

OR

2 a. Enumerate the effects of air pollution on human health and vegetation. **(10 Marks)**

b. Define inversion. Briefly explain the different types of inversion with the aid of neat sketch. **(10 Marks)**

Module-2

3 a. List and explain the various meterological parameters that influence air pollution. **(10 Marks)**

b. Explain the various types of plume behaviors with a neat sketch showing temperature gradient. **(10 Marks)**

OR

4 a. Explain wind rose diagram with a neat sketch in detail. **(10 Marks)**

b. A factory uses 2,00,000 litres of furnace oil (specific density 0.97) per month. If for one million litres of oil used per year, the particulate matter emitted is 3.0 tonnes per year, SO_2 emitted is 59.7 tonnes per year, NOx emitted is 7.5 tonnes per year, hydrocarbons emitted are 0.37 tonnes per year and carbon monoxide emitted is 0.52 tonnes per year, calculate the height of the chimney required to be provided for safe dispersion of the pollutants. **(10 Marks)**

Module-3

5 a. With a neat sketch, describe the methods of gaseous sampling by sampling train. **(10 Marks)**

b. Explain any one method for measuring the concentration of the oxides of nitrogen in stack. **(10 Marks)**