



B.E. DEGREE EXAMINATIONS: APRIL / MAY 2023

(Regulation 2018)

Seventh Semester

CIVIL ENGINEERING

U18CEE0006: Air and Noise Pollution Control

COURSE OUTCOMES

- CO1:** Categorize the various sources, types, and nature of air pollutants and their effects on living and Non-living beings
- CO2:** Perform quantitative measurements of the dispersion of pollutants in the atmosphere
- CO3:** Understand the sources and effects of Indoor Pollution and its Control measure
- CO4:** Determine the principle involved in pollutant removal and their control measures
- CO5:** Learn about the effects and the sources of noise pollution and its Legislation

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 2 = 20 Marks)

(Answer not more than 40 words)

- | | | |
|---|-----|------|
| 1. What is the index for good and bad air quality? | CO1 | [K2] |
| 2. Write the layers of the atmosphere | CO1 | [K2] |
| 3. Define the term ventilation coefficient and mention its importance | CO2 | [K2] |
| 4. What is a wind rose in air pollution and why is it called so? | CO2 | [K2] |
| 5. Name the six ambient air pollutants. | CO3 | [K2] |
| 6. What are bioaerosols in the environment? | CO3 | [K2] |
| 7. Define Indoor air pollution. Give its ill effects | CO4 | [K2] |
| 8. Give the decay products of radon and mention their ill effects | CO4 | [K2] |
| 9. Write the difference between noise and sound. | CO5 | [K2] |
| 10. What are the causes of noise pollution? | CO5 | [K2] |

Answer any FIVE Questions: -

PART B (5 x 16 = 80 Marks)

(Answer not more than 400 words)

- | | | | |
|---|---|-----|------|
| 11. a) Write the sources and classification of air pollutants | 8 | CO1 | [K2] |
| b) Discuss the effect of air pollution on human, animals and plants. | 8 | CO1 | [K2] |
| 12. a) Explain in detail about various types of plume behavior with neat sketch | 8 | CO2 | [K2] |

	b)	Write a brief note on Gaussian Model focusing on the assumptions made and its merits/demerits	8	CO2	[K2]
13.	a)	Explain the principle of absorption and adsorption for control of gaseous pollutants	8	CO3	[K2]
	b)	Define the term Sick Building Syndrome (SBS) and explain the causes of SBS	8	CO3	[K2]
14.	a)	Explain the working principle, advantages and disadvantages of Electrostatic Precipitator (ESP)	8	CO4	[K2]
	b)	Discuss the factors to be considered in selection of equipment for control of particulate containments.	8	CO4	[K2]
15.	a)	Explain the sources of Indoor air pollution.	8	CO4	[K2]
	b)	Write the National Ambient Air Quality Standards (NAAQS) with respect to Noise.	8	CO5	[K2]
16.	a)	Explain the various sources and their effects of noise pollution	8	CO5	[K2]
	b)	Find the Average Sound Pressure Levels when four sounds 45, 55, 65 and 75 dB(re) are measured in a calm area during night hours and comment your result. Take Average sound pressure level as 20 μ Pa.	8	CO5	[K3]
