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Question Paper Code	12744
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**B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2024**

Sixth Semester

**Electronics and Communication Engineering**

**20CYOE905 - AIR POLLUTION AND CONTROL ENGINEERING**

Regulations - 2020

Duration: 3 Hours

Max. Marks: 100

**PART - A (10 × 2 = 20 Marks)**

Answer ALL Questions

	Marks	K- Level	CO
1. List out the type of air pollutants.	2	K1	CO1
2. Write the effects of air pollution on plants.	2	K2	CO1
3. What do you mean by meteorological model?	2	K2	CO2
4. Define plume rise.	2	K1	CO2
5. Mention any two-control equipment for removing fine particulate matters.	2	K2	CO3
6. What are the various types of Particulate scrubbers?	2	K2	CO3
7. Differentiate adsorption and absorption.	2	K2	CO4
8. What is the importance of activated carbon in adsorption?	2	K1	CO4
9. Suggest two important steps to control indoor air quality.	2	K2	CO5
10. Define sick building syndrome.	2	K1	CO5

**PART - B (5 × 13 = 65 Marks)**

Answer ALL Questions

11. a) i) Tabulate the ambient air quality standards and mention the objectives.	7	K2	CO1
ii) Classify various sources of air pollutants.	6	K2	CO1
<b>OR</b>			
b) Discuss in detail about the effects of air pollution on property and aesthetic value and visibility.	13	K2	CO1
12. a) i) Compare the plume behaviors under different conditions of atmospheric stability.	7	K2	CO2
ii) Write short notes on atmosphere stability and inversion.	6	K2	CO2
<b>OR</b>			
b) Express dispersion model and explain their types with its applications.	13	K2	CO2
13. a) With a neat sketch explain the principle, construction and working of an electrostatic precipitator along with its advantages and disadvantages.	13	K2	CO3

**OR**

- b) i) Discuss in detail about the factors affecting selection of control equipment. 7 K2 CO3  
ii) Write short notes on gravity separators. 6 K2 CO3
14. a) i) Briefly discuss on types of carbon adsorption system with suitable neat sketch. 7 K2 CO4  
ii) Write a short note about condensation process with examples. 6 K2 CO4

**OR**

- b) Describe Biofiltration. Explain the components and working of Bio filtration units. 13 K2 CO4
15. a) Discuss in brief the various sources of noise and their typical noise levels, in a modern society. Explain the control and preventive measures undertaken for noise pollution. 13 K2 CO5

**OR**

- b) i) Explain with examples how air pollution affects building material. 7 K2 CO5  
ii) What are the causes for Indoor Air Pollution? List few Indoor Air Pollutants and their health effects. 6 K2 CO5

**PART - C (1 × 15 = 15 Marks)**

16. a) i) Explain what you understand by air quality monitoring. 8 K2 CO4  
ii) Write a brief note about control and monitoring of gaseous pollutants on environment. 7 K2 CO4

**OR**

- b) Explain in detail the wet scrubbing devices in pollution control with a neat sketch. 15 K2 CO3