Reg. No.												

Question Paper Code	11876

14 JUN 202

B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2023

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.	Briefly explain greenhouse effect.	*2,K2,CO1*
2.	What are air quality standards?	*2,K1,CO1*
3.	Define plume rise.	*2,K1,CO2*
4.	What are dispersion models?	*2,K1,CO2*
5.	What are settling Chambers?	*2,K1,CO3*
6.	What are the advantages and disadvantages of fabric filters?	*2,K1,CO3*
7.	List some of the materials used as adsorbent.	*2,K1,CO4*
8.	Define condensation.	*2,K1,CO4*
9.	Define Sick Building Syndrome.	*2,K1,CO5*
10.	Define 'Hearing Threshold Level' (HTL).	*2,K1,CO5*

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

11.	a)	Give a detailed account on sources and classification of air pollutants.	*13,K1,CO1*
		OR	
	b)	Explain the effects of air pollution on human health, animals, vegetation.	*13,K2,CO1*
12.	a)	Briefly discuss about the various meteorological parameters that influencing air pollution.	*13,K2,CO2*
		OR	
	b)	Discuss the various plume patterns for the different prevailing lapse rates.	*13,K2,CO2*
13.	a)	What is a cyclone separator? Explain its working principle.	*13,K2,CO3*
		OR	
	b)	What is the working principle of Electrostatic precipitator? Explain the components in it and its working and design factors.	*13,K2,CO3*

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create

14. a) What is combustion? How do combustion process is applied in gaseous emission control? *13,K2,CO4*

OR

b) What is Bio-filtration? Explain the components and working of Bio-filtration units. *13,K2,CO4*

15. a) Describe causes, types and control measures of indoor air pollutants. *13,K2,CO5*

OR

b) What are the sources of noise pollution and control strategies to be adopted? *13,K2,CO5*

PART - C (1 × 15 = 15 Marks)

16. a) What are the scrubbing devices in pollution control? Explain with a neat sketch. *15,K2,CO3*

OR

b) List and discuss about the factors influencing the choice of air pollution control equipment. *15,K2,CO4*