18CE101

Hall Ticket Number:

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IV/IV B.Tech (Regular) DEGREE EXAMINATION

December, 2021 — **Institutional Elective**

Seventh Semester — **Air Pollution and Control**

Time: Three Hours — **Maximum:** 50 Marks

Answer Question No.1 compulsorily. (10X1 = 10 Marks)

Answer ONE question from each unit. (4X10=40 Marks)

1.	a)	Is photochemical smog a secondary pollutant justify?	CO1	
	b)	What are non-point sources of air pollution?	CO1	
	c)	List the global effects of air pollution.	CO1	
	d)	How is humidity measured in the atmosphere?	CO2	
	e)	Outline the importance of wind rose?	CO2	
	f)	Define lapse rates.	CO2	
	g)	Which device controls particulate pollutants?	CO3	
	h)	List out objectives to be considered using control equipment for air pollution.	CO3	
	i)	What are the main features of Air Act, 1981?	CO4	
	j)	What causes SOx emissions?	CO4	

Unit -I

2.		Classify and list the various sources of air pollution with minimum of two examples of each.	CO1	10M

(OR)

3.	a)	Define acid rain. Illustrate the effects of acid rain on humans.	CO1	5M
	b)	Explain the causes and effects of greenhouse effect?	CO1	5M

Unit –II

4.		Explain wind rose with a neat sketch?	CO2	10M

(OR)

5.		Sketch the various plume phenomena and discuss a sketch in relation to dry adiabatic lapse rate.	CO2	10M

Unit -III

6.	a)	Why usage of Electrostatic precipitators is limited? Give its advantages and disadvantages.	CO3	6M
	b)	Explain with a neat sketch the construction of fabric filter and give its applications?	CO3	4M

(OR)

7.		Explain the Gaussian dispersion model with assumptions and limitations?	CO3	10M

Unit -IV

8.		Describe the removal and control technologies for SOx.	CO4	10M

(OR)

9.	a)	What do you mean by air quality management? Explain its role and importance in present situations.	CO4	6M
	b)	Explain how do you control the emission of NOx using desulphurization?	CO4	4M