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Reg. No. :	
Question Paper Code: 90293	
B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2022.	
Sixth Semester	
Civil Engineering	
CE 8005 — AIR POLLUTION AND CONTROL ENGINEERING	
(Regulations 2017)	
Time : Three hours Maximum : 100 marks	
Answer ALL questions.	
PART A — $(10 \times 2 = 20 \text{ marks})$	
State the sources and classification of air pollutants.	
2. Define a representative sample.	
3. Define adiabatic lapse rate. 4. What is plume dispersion?	m
What are gravity settlers? Give examples.	
 Explain briefly the removal mechanism in Electrostatic precipitators. 	
7. How do condensation bring control on gaseous emission?	
9. Define a sick building.	
10. Define the unit of measurement of sound level.	
PART B — (5 × 13 = 65 marks)	
 (a) Demonstrate the impact of air pollutants on human being, vegetation and on properties by citing good examples. 	1
Or	
(b) Illustrate the need and applications of ambient air quality and emission standards. How could both ambient and stack sampling be done?	n
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12. (a)	Demonstrate different plume pattern possible from a stack with respect to prevailing atmospheric stability conditions and lapse rate.	
	Or	
(b)	Explain in detail the Gaussian dispersion model for the prediction of Ground level concentration of pollutants emitted from a stack.	
13. (a)	Explain with a help of neat sketches the working principle of a cyclone separator and a wet scrubber. Bring out the merits and demerits of both system.	
	Or	
(b)	Illustrate with neat sketches the performance and working mechanism of a bag house filter. Also discuss the operational troubles encountered in it.	
14. (a)	Describe an absorption and adsorption tower and its operational principle in the removal of gaseous contaminants from a contaminated air stream.	
	Or	
(b)	(i) Make a brief description on Bio-Scrubbers in the removal of dirty gases. (7)	
15. (a)	(ii) Explain the working principle of an incinerator in converting a pollutional gas stream into pollution free. (6) Explain the air pollution control strategies for a building subjected to indoor air pollution from different sources.	r
	Or	
(b)	Explain different noise pollution control strategies available and discuss the factors influencing noise pollution.	
	PART C — (1 × 15 = 15 marks)	
16. (a)	As an environmental/Town planner, how would you plan for a city being free from possible air pollution from various sources including industries situated.	
(b)	Or An industry is emitting huge amount of gaseous including particulate	
han man		
	Highest the read and explications of ambient on quality and standards, they could bette makern and annex coupling by done	
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