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		GUJARAT TECHNOLOGICAL UNIVERSITY M.E –II st SEMESTER–EXAMINATION – JULY- 2012		
Subje	Subject code: 1721707 Date: 12/07/2012			
Subject Name: Air Pollution Control				
Time: 10:30 am – 13:00 pm		30 am – 13:00 pm Total Marks:	70	
Instructions:				
		empt all questions.		
3. Figures to the right indicate full marks.		ke suitable assumptions wherever necessary. The sto the right indicate full marks.		
Q.1	(a) (b)	Discuss natural and anthropogenic sources of air pollution in detail. List out the effects of air pollution on humans and on environment. Explain any one effect on each in detail.	07 07	
Q.2	(a)	What do you mean by ubiquitous pollutant? With neat figure explain SPM sampling train.	07	
	(b)	Distinguish absorption and adsorption clearly. Use figures if necessary. Explain the absorption technique for sulfur dioxide. OR	07	
	(b)	Differentiate particulate and VOC. Discuss in detail control of VOC by prevention.	07	
Q.3	(a)	What is ambient measurement in context of air pollution? What are national ambient air quality standards? Give vitals of The Air (Prevention and Control of Pollution) Act, 1981.	07	
	(b)	Using neat figure, explain various layers of atmosphere of Earth. OR	07	
Q.3	(a)	Explain the importance of meteorology study in air pollution. What is 'adiabatic lapse rate'?	07	
	(b)	Discuss the importance of winds in air pollution studies. Explain 'wind rose diagram' with neat figure.	07	
Q.4	(a)	Define dust, fume and smoke. Using neat diagram with details, explain bag houses.	07	
	(b)	What is the most basic principle of chimney design? With neat diagram, explain 'draft'.	07	
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Q.4 Q.4	(a) (b)	Discuss with figure – 'Selective Catalytic Reduction' Explain the electromagnetic radiation from sun. Establishing its context to CO2, discuss in detail the role of CO2 as GHG.	07 07	
Q.5	(a) (b)	Differentiate – gravity settlers and centrifugal separators. Discuss in detail – 'Gaussian Plume Model' in context to air pollution studies.	07 07	
	OR			
Q.5	(a)	Discuss the scenario of automobile air pollution in India with proper statistics.	07	
	(b)	List out the emission of various greenhouse gases, with different automobile fuels. Discuss any one GHG in detail in this context.	07	
