Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

Subjec	ct cod	e: 1721707 Date: 02-01-2014	1	
Subject Name: Air Pollution Control Time: 10.30 am – 01.00 pm Total Instructions:		0 am - 01.00 pm Total Marks: 70	al Marks: 70	
	1. Att 2. Ma	tempt all questions. ake suitable assumptions wherever necessary. gures to the right indicate full marks.		
Q.1	(a)	Define Air Pollutant. Give classifications of Air Pollutant with	07	
	(b)	examples. Explain the effects of air pollutant on the material.	07	
Q.2	(a)	What is the impact of different meteorological condition on air	07	
	(b)	pollution dispersion? Discuss the sources, characteristics and effects of following air pollutant on human health? (i) CO ₂ (ii) RSPM.	07	
		OR		
	(b)	Write a Short Note on "Photochemical Smog".	07	
Q.3	(a)	Write the objectives of ambient air quality monitoring? Describe the procedure for collection of SPM.	07	
	(b)	Describe the procedure for collection and analysis $$ of NO_2 from the stack.	07	
		OR		
Q.3	(a)	Briefly describe the salient features of Air Act'81.	07	
	(b)	What is Air pollution Index? Describe various methods for measuring Air Pollution Index.	07	
Q.4	(a)	Write a short note "Atmospheric Stability".	07	
	(b)	Write a Short note on "Plume Behaviour"	07	
		OR		
Q.4	(a)	Describe "Gaussian Plume Model".	07	
Q.4	(b)	Estimate the concentrations of SO_2 downwind of a 1000 MW power plant burning 8500 tons of 1% sulfur coal per day. The stack height is 150. The wind speed is 3.0 m/sec at the top of 10 tower. The hourly mean values of σ_y and σ_z at 1 km downwind are 180 and 250 m.	07	

	(b)	Write a Short note on "Cyclone".	
		OR	
Q.5	(a)	Explain with brief sketch, the working of a Fabric Filter.	07
	(b)	Write a short note on gaseous air pollution control by adsorption.	07
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