Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY			
U		017 06/05/2017	
Ti	ime:		Marks: 70
Q.1	(a) (b)	Discuss various sources of air pollutants. Discuss its classification. Describe various geometric forms of plumes as per atmospheric stability also discuss pollution potential of each form.	07 07
Q.2	(a) (b)	Describe the mechanisms of action of air pollutants on materials. Discuss "London smog episode" and "Meuse Valley Disaster". OR	07 07
	(b)	State the phenomena of Green house effect. State its implications and control measures.	07
Q.3	(a) (b)	Describe ozone depletion and its impact. Discuss effects of air pollutants on human beings. OR	07 07
Q.3	(a) (b)	Describe sources of air pollution from an automobile and their control measures. Write short note on "Electrostatic Precipitator".	07 07
Q.4	(a) (b)	•	
Q.4	(a)	Calculate effective height of a stack for following data: Physical height of stack = 120m Inside diameter of stack = 0.90m Wind velocity = 3.60m/s Air temperature = 20°C Barometric Pressure = 1000 millibars Stack gas velocity = 10m/s Stack gas temperature = 150° C.	07
	(b)	Sketch and explain the principle, construction and working of a cyclone.	07

What is a catalytic converter? What is its significance? What are the limitations Q.5 (a) **07** in its use in present context?

Describe "Adsorption and Absorption" as a method for sampling of **(b) 07** gaseous pollutants.

OR

Write short note on "Legislation for control of air pollution and automobile Q.5 (a) **07** pollution.

(b) Write a short note on "Gaussian Plume Model". **07**
