

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI (NEW) EXAMINATION – WINTER 2018

Subject Code:2161302

Date:16/11/2018

Subject Name:Fundamentals of Air Pollution

Time: 02:30 PM TO 05:00 PM

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

			MARKS
Q.1	(a)	Define following terms: (i) Aerosol (ii) Mists (iii) Fog	03
	(b)	Explain the effects of Particulate matter on plants.	04
	(c)	Give the national ambient air quality standards .	07
Q.2	(a)	Enlist and explain instruments used for atmospheric sampling.	03
	(b)	Give the classification of air pollutants.	04
	(c)	Discuss the Effects of Particulate Matter on Human Health.	07
		OR	
	(c)	Give classification of plume behavior. Show their temperature, velocity profile along with the plume shape.	07
Q.3	(a)	Write down the applications of Wind Rose Diagram.	03
	(b)	Enlist and explain meteorological parameters.	04
	(c)	Write a short note on Gaussian dispersion model.	07
		OR	
Q.3	(a)	Derive the lapse rate $dt/dz = 10 \text{ C}/100\text{m}$.	03
	(b)	Write Short note on Heat island Effects.	04
	(c)	Explain the Eddy diffusion model.	07
Q.4	(a)	Define Noise pollution & noise standards.	03
	(b)	Write a short note on sound measurement.	04
	(c)	Write Short Note on High Volume Air Sampler.	07
		OR	
Q.4	(a)	Explain the effects of noise pollution on human health.	03
	(b)	Write a short note on Maximum mixing depth.	04
	(c)	Enlist five air pollution episodes and describe any two in brief.	07
Q.5	(a)	Define stack standards with example.	03
	(b)	Discuss the Effects of Carbone Monoxide on plants and animals.	04
	(c)	What is Odour? How it is measure? Explain the sources of odour.	07
		OR	
Q.5	(a)	Enlist the types of Inversion.	03
	(b)	Differentiate between ALR and ELR.	04
	(c)	Enlist the methods of Odour control and explain any three in detail.	07
