GUJARAT TECHNOLOGICAL UNIVERSITY
BE- SEMESTER–V (NEW) EXAMINATION – WINTER 2020

Subject Code:3151309   Date:29/01/2021
Subject Name:Fundamentals of Air Pollution
Time:10:30 AM TO 12:30 PM   Total Marks: 56

Instructions:
1. Attempt any FOUR questions out of EIGHT questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

			MARKS
Q.1	(a)	Enlist the effect of SO_2 on vegetation and buildings.	03
	(b)	Define Air Pollutants. Explain the classification of Air Pollutants.	04
	(c)	Discuss the Effects of Carbon Monoxide on Plants, Vegetation and Human health.	07
Q.2	(a)	Differentiate between subsidence and radiation inversion.	03
	(b)	Write a Short note on Heat Island Effect.	04
	(c)	What is Isokinetic Sampling? Discuss in detail.	07
Q.3	(a)	Explain about representative sample?	03
	(b)	Enlist the stability condition of atmosphere and explain stable atmosphere with diagram.	04
	(c)	Explain Wind rose diagram and enlist its application.	07
Q.4	(a)	Differentiate between Super adiabatic and sub adiabatic condition.	03
	(b)	Derive the relationship between ppm and $\mu g/m^3$.	04
	(c)	Explain the Eddy diffusion model.	07
Q.5	(a)	Define the following terms (i) soot (ii)fog (iii) smoke	03
	(b)	Explain the Gaussian dispersion model.	04
	(c)	With the help of a neat sketch explain stack sampling.	07
Q.6	(a)	Discuss MMD in detail.	03
	(b)	Which pollutants are measures from the stack? Enlist those pollutants with its permissible limits.	04
	(c)	Write Short Note on High Volume Air Sampler.	07
Q.7	(a)	Explain Photo chemical smog in brief.	03
	(b)	Define odor. Explain the characteristics of odor.	04
	(c)	Enlist odor control techniques and explain any one.	07
Q.8	(a)	Write down the effects of Noise on human.	03
	(b)	Briefly explain the characteristics of Noise.	04
	(c)	Explain role of oxides of nitrogen in photo oxidation.	07

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