

GUJARAT TECHNOLOGICAL UNIVERSITY**BE – SEMESTER- V EXAMINATION-SUMMER 2023****Subject Code: 3153512****Date: 03/07/2023****Subject Name: Air Pollution Control - I****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.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1	(a) Explain effective stack height.	03
	(b) What is CEPI? Explain in brief.	04
	(c) What do you understand by AQI? How is it calculated?	07
Q.2	(a) What is Maximum Mixing Depth?	03
	(b) Draw a neat sketch of fumigation, trapping and coning.	04
	(c) Discuss in detail about the sampling procedure for Benzo(a)Pyrene.	07
OR		
	(c) Discuss in detail about the sampling procedure for Ozone.	07
Q.3	(a) What is inversion?	03
	(b) What are the operational problems of Bag House?	04
	(c) Explain the working of cyclone separator with a neat diagram.	07
OR		
Q.3	(a) What are the health effects of CO?	03
	(b) What are the methods to control odour? Explain in detail.	04
	(c) Explain in detail about the physical and physiological effects of noise pollution?	07
Q.4	(a) What is air pollution? What are the different types of air pollutants?	03
	(b) What is heat island effect?	04
	(c) Explain the construction of venturi scrubber with a neat diagram.	07
OR		
Q.4	(a) Explain Land and Sea	03
	(b) Explain the control methods for automobile emission.	04
	(c) Explain the construction of packed bed column with a neat diagram.	07
Q.5	(a) Discuss the advantages and disadvantages of gravity settling chamber.	03
	(b) Define atmospheric stability and lapse rate.	04

- (c) What is the absorbing reagent used for sampling of Nitrogen dioxide? Explain the steps for sampling of Nitrogen dioxide. **07**

OR

- Q.5** (a) What is ventilation coefficient? **03**
(b) What are the different types of scrubbers? Explain in brief. **04**

- (c) What is the absorbing reagent used for sampling of Sulphur dioxide? Explain the steps for sampling of Sulphur dioxide. **07**
