

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI EXAMINATION – SUMMER 2025

Subject Code: 3161308

Date: 28-05-2025

Subject Name: Air Pollution Control and Management

Time: 10:30 AM TO 01:00 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.

- Q.1** (a) Give your comments on Effect of Fuel on emission of pollutant. **03**
(b) Draw a neat sketch of Electrostatic Precipitator. **04**
(c) Explain Working principle of Venturi Scrubber. **07**

- Q.2** (a) Enlist Selection criteria of Air Pollution Control Equipments. **03**
(b) Enlist and explain the Disadvantages of Gravity Settling Chamber. **04**
(c) Write a short note on scrubber along with sketch. **07**

OR

- (c) Briefly explain the construction of Cyclone Separator.. **07**

- Q.3** (a) Differentiate between four stroke and two stroke engine. **03**
(b) Write a short note on Turbojet Engine. **04**
(c) Write a short note on A/F ratio. **07**

OR

- Q.3** (a) Draw a neat sketch of stratified charge engine. **03**
(b) Highlight the importance of rotary combustion engine. **04**
(c) How engine design changes affect the auto exhaust emission? **07**

- Q.4** (a) Differentiate between Single alkali and Double Alkali scrubbing. **03**
(b) Draw a neat sketch of Carbon Adsorption Process. **04**
(c) Discuss combustion control methods for NOx. **07**

OR

- Q.4** (a) Enlist the sources of VOCs. **03**
(b) Write the control methods of VOCs. **04**
(c) Write a short note on Citrate Scrubbing with neat sketch. **07**

- Q.5** (a) Draw neat sketch of cyclone in series and scrubber in series. **03**
(b) Enlist and explain industrial applications of ESP. **04**
(c) Draw Air pollution control scheme for thermal power plant and also mentioned sources and types of air pollutants. **07**

OR

- Q.5** (a) Explain advantages of cyclone in series and scrubber in series. **03**
(b) Enlist advantages and disadvantages of bag filter. **04**
(c) Draw Air pollution control scheme for ceramic and also mentioned sources and types of air pollutants. **07**
