Seat No.:	Enrolment No
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## GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V (OLD) - EXAMINATION - SUMMER 2017 **Subject Code: 151305** Date: 15/05/2017 **Subject Name: Air Pollution & Control (Institute Elective - II)** 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.
- What are the green house gases? Explain the phenomenon of melting ice & its 07 **Q.1** (a) effect on earth. (b) Describe the effects of air pollution on human, vegetation and materials. **07 Q.2** (a) Explain A/F ratio in detail. 07 (b) Define a wind rose. Explain the importance of wind roses in air pollution 07 studies. OR

(b) Explain absorption and dispersion along with examples. Write a short note on alternative fuel. 0.3 (a)

Explain construction and working of electrostatic precipitators. 07

Q.3 (a) List out the methods for odour control. Explain any three of them. 07 Explain NOx control by: 07 **(b)** (1) Absorption by liquid (2) catalytic reduction

0.4 What is MMD? How it is determined? What is its importance? 07 (a)

Explain photochemical smog and its effects. 07

**Q.4** (a) Plot and explain **07** (1) Dry adiabatic lapse rate

(2) Environmental lapse rate

(b) Explain limestone scrubbing for control of SOx. 07

Write a short note on: CNG – an alternate fuel with its effects on engine 0.5 **07** performance.

**(b)** Explain merits and demerits of cyclone separator. 07

(a) Describe history of various air pollution episodes held till now. 07 **Q.5** 07

Explain the following atmospheric condition.

(1) Super adiabatic

(2) Sub adiabatic

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07

07