

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E. SEMESTER III-EXAMINATION – WINTER 2015

Subject code: 2731704

Date: 04/12/2015

Subject Name: Air Pollution Control Equipment

Time: 2:30 PM to 5:00 PM

Total Marks: 70

Instructions:

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

- Q.1** (a) Discuss air as fluid. **07**
(b) Discuss the fundamentals of control of particulate matter. **07**
- Q.2** (a) What are the different sources of air pollution? **07**
(b) What is a cyclone? How does it work, as equipment in air pollution control? **07**
Explain with neat diagrams.
- OR**
- (b) What is a settling chamber? How does it work, as equipment in air pollution control? Explain with neat diagrams. **07**
- Q.3** (a) Define laminar and turbulent flow. Explain with neat diagrams and necessary definitions. **07**
(b) What is a plume? Explain its types with neat diagrams, and its context to air pollution control. **07**
- OR**
- Q.3** (a) Discuss the current urbanization scenario of country, thereby discuss the challenges in facing the vehicular pollution in india. **07**
(b) Write short note on High Volume Sampler. **07**
- Q.4** (a) In detail explain the theory of condensation. **07**
(b) Explain working of baghouse with diagrams. **07**
- OR**
- Q.4** (a) Explain working of mist eliminator with neat diagrams. **07**
(b) What is an Atmospheric water generator? Explain. **07**
- Q.5** (a) Short note – Theory of electrostatic precipitation. (With diagrams.) **07**
(b) Explain adsorption. **07**
- OR**
- Q.5** (a) Short note – Basics of a Scrubber system. (With diagrams.) **07**
(b) Theory of acid rain. **07**
