

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**

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