

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**ME Semester –I Examination Feb. - 2012**

**Subject code: 711801N****Date: 11/02/2012****Subject Name: Air Pollution Control and management****Time: 10.30 am – 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.

- Q.1** (a) Discuss meteorological factors influencing air pollution . **07**  
(b) Discuss types of plume behaviour with diagram. **07**
- Q.2** (a) Derive lapse rate  $dt/dz$  . **07**  
(b) Write short note on air pollutants. **07**
- OR**
- (b) Write short note on air quality and emission standards. **07**
- Q.3** (a) Discuss application of wind rose .How to construct wind rose? **07**  
(b) Enlist selection criteria for particulate control equipment. **07**
- OR**
- Q.3** (a) Discuss design criteria of cyclone separator with diagram. **07**  
(b) Write short note on Gravity settler. **07**
- Q.4** (a) Explain bag filter with diagram. **07**  
(b) Describe types of bag cleaning mechanisms. **07**
- OR**
- Q.4** (a) Discuss control equipments for gases and vapours. **07**  
(b) Discuss combustion control methods for NO<sub>x</sub>. **07**
- Q.5** (a) Discuss advantages and disadvantages of ESP. **07**  
(b) Discuss single alkali methods for scrubbing sulfur dioxide. **07**
- OR**
- Q.5** (a) Write short note on air pollution indices. **07**  
(b) Write short note on air pollutants sampling. **07**

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