

GUJARAT TECHNOLOGICAL UNIVERSITYB.E. Sem-Vth Examination December 2010**Subject code: 151305****Subject Name: Air Pollution & Control****Date: 21 /12 /2010****Time: 03.00 pm - 05.30 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) Define the following terms: **07**
(i) Absorption (ii) Air Pollution Index (iii) Bag Filter
(iv) Dispersion (v) Heat Island (vi) Plume (vii) Meteorology
- (b) Briefly Describe the History of Different Air Pollution Episodes held till Now. **07**
- Q.2** (a) Describe the Effects of Air Pollution On Human, Vegetation and Materials. **07**
- (b) Explain Briefly about Photochemical Smog & effects of the same. **07**
- OR**
- (b) Give classification of air pollutant based on sources. **07**
- Q.3** (a) Classify air pollutants into different categories, indicating their sources. **07**
- (b) Explain the role of meteorological elements in the dispersion of air pollutants in the atmosphere. **07**
- OR**
- Q.3** (a) Define a wind rose. Explain the importance of wind roses in air pollution studies. **07**
- (b) Write a detailed note on plume behavior. **07**
- Q.4** (a) Explain any two emission control methods in automobiles. **07**
- (b) What are the advantages of using CNG as a fuel? Does it affect engine performance? If so, how? **07**
- OR**
- Q.4** (a) Explain removal of sulphur from fuels. **07**
- (b) Explain NO_x control by **07**
A) Absorption by liquid.
B) Catalytic Reduction.
- Q.5** (a) With a neat sketch explain the principal, Construction and working of a cyclone separator. **07**
- (b) What are the advantages and disadvantages of electrostatic precipitators? **07**
- OR**
- Q.5** (a) How do we perceive odour? What are the problems associated with its measurement? Explain how odour is measured? **07**
- (b) Describe the sources of odour pollution along with the pollutants responsible for it. **07**
