Code No: NR410107 **NR**

IV B.Tech I Semester Supplementary Examinations, April/May 2005
AIR POLLUTION AND CONTROL
(Civil Engineering)

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Name the various pollutants causing air pollution and describe the role played by them.
   (b) What do you understand by the following terms as used in air pollution
      i. Smog
      ii. Acid rain
      iii. Air zoning
      iv. Dilution
2. (a) What are the principal chemical reactions that take place in the Chemosphere to give it its name?
   (b) How do they influence strotospherts and trophospheric chemical reactions.
3. (a) What is dose response curve? How do we establish the dose response curve for a pollutant?
   (b) Discuss in detail the harmful effects of air pollutants on materials.
4. (a) Explain different approaches for controlling oxides of nitrogen in combustion processes.
   (b) Discuss in detail the scrubbing methods for effluent gas treatment for reduction of nitrogen oxides?
5. Explain the following:
   (a) Effect of water bodies on pollutant dispersion.
   (b) Effect of Ridges/Buildings on plume dispersion.
6. Discuss the mechanism that leads to radiative-inversion-What causes it to break up and at what time does it usually occurs.
7. (a) What are the methods available to control air pollution by process changes? Illustrate with examples?
   (b) Draw typical flow diagram of absorption of N0x by magnesium hydroxide.
8. State the advantages and disadvantages of Electro Static Precipitators over the others.

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