

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- September 2016

B.Tech 7<sup>th</sup> Semester

COURSE CODE: 10B13CE742

MAX. MARKS: 15

COURSE NAME: Air Pollution Monitoring and Control

COURSE CREDITS: 3

MAX. TIME: 1Hr

*Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.*

1. Define Air pollution and air pollutants. (2)
2. What are the major sources of air pollution? What are primary pollutants and secondary pollutants? Give examples. (3)
3. Discuss the environmental effects of particulate matter, NO<sub>x</sub>, SO<sub>x</sub>, CO and CO<sub>2</sub>. (3)
4. Write short note on global warming and acid rain. (2)
5. A power plant of 1000 MW capacity burns 50 Ton coals/MW/Day. During thus burning process, the Plant has the following information.  
Sulphur in coal: 0.5% (weight/weight)  
Temperature in stack: 125°C  
Pressure in stack: 1.5 atm  
Stack exit velocity: 15m/s  
Diameter of stack: 10m  
Estimate SO<sub>2</sub> concentration in kg/day and ppm.  
Assume complete combustion of sulphur components. (3)
6. The average daily concentration of SO<sub>2</sub> is observed to be 415 µg/m<sup>3</sup> at 25° C and 1 atmospheric pressure. Find out concentration of SO<sub>2</sub> in ppm. (2)