6CE147 Air Pollution Engineering

L-T-P-Cr: 3-0-0-3

Objective: To impart knowledge and skill for pollutants identification, classification other properties of pollutants, control of the air pollution

Theory: 1. Air pollutants, Sources, classification. 3 Lectures

 2. Combustion Processes and pollutant emission, 4 Lectures

 3. Effects on Health, vegetation, materials and atmosphere 4 Lectures

 4. Reactions of pollutants in the atmosphere and their effects-Smoke, smog and ozone layer disturbance etc. 8 Lectures

5. Atmospheric diffusion of pollutants and their analysis, Transport, transformation and deposition of air contaminants on a global scale. 8 Lectures

 6. Air sampling and pollution measurement methods, principles and instruments, Ambient air quality and emission standards. 5 Lectures

7. Control principles, Removal of gaseous pollutants by adsorption, absorption, reaction and other methods. Particulate emission control, settling chambers, cyclone separation, Wet collectors, fabric filters, electrostatic precipitators and other removal methods. 10 Lectures

 Text Books: 1. Air Pollution, Rao & Rao, TMH. 2. Air Pollution Control Engineering, Rao, TMH Reference Books: 1. Environmental Engineering, Peavy, Rowe and Tchobanogous, McGraw-Hill International edition End Semester Examination (3 Hrs.): The duration of the Examination will be 3 hrs. The questions will be comprehensive, i.e. from the entire unit, may have subsections with both theoretical and (or) numerical exercises.

Expected Outcome: The students would be able to identify, classify and determine properties of different types of pollutants and also able to know the control measure of the pollution.