MBPC3047 AIR POLLUTION AND CONTROL TECHNOLOGY (3-0-0)

Module-I: (6 Hours)
Air Pollution:
Sources of ambient and indoor air pollution; types of air pollutants, emission inventory, effects of air pollution in regional and global scale.

Module-II: (5 Hours)
Air Quality Monitoring:
Objectives, ambient and indoor air sampling methods and devices, stack monitoring, analysis of air pollutants, air pollution standards and indices.

Module-III: (6 Hours)
Atmospheric meteorology and dispersion of air pollutants:
Temperature lapse rates and atmospheric stability, inversions, wind profiles, wind velocity and turbulence, plume behaviour.

Module-IV: (10 Hours)
Particulate matter and gaseous pollutants control technologies:
Control methods for air pollution, factors affecting selection of control equipment, working principle, operational considerations, process control and monitoring, particulate matter and gaseous air pollution control equipment.

Module-V: (8 Hours)
Vehicular pollution:
Internal combustion engines, after exhaust treatments, alternative transportation fuels, emission measurement and testing, regulation to control vehicular emission.

Text Books:

1. Environmental Engineering- Peavy & Rowe. Prentice Hall Pub.
2. Air Pollution Control – Rao and Rao
3. Environmental Pollution and Control – C.S. Rao

Reference Books:

1. Noel de Nevers, Air Pollution Control Engineering, Mc Graw Hill, New York.
2. Arthur C. Stern, Air Pollution (Vol. I – Vol. VIII), Academic Press
3. Introduction to Environmental Engineering and Science, Gilbert M Masters
4. CPCB manual for Guidelines for ambient air quality monitoring. Published By: Dr. B. Sengupta, Member Secretary, Central Pollution Control Board