

AIR POLLUTION CONTROL (Elective-II)

Course Code: 15CH2109

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Course outcomes: On successful completion of the course, the student should be able to

CO1: Recognize and explain different types of air pollutants in industry.

CO2: Discuss effects of air pollution on humans, animals and

CO3: plants. **CO3:** Compare different types of air pollution sampling methods.

CO4: Select equipment for air pollution control in atmosphere.

CO5: Outline specific gaseous pollutants in atmosphere to meet mission standards.

UNIT-I (10-Lectures)

Air Pollution: Introduction, Sources and Classification of Air Pollutants, Meteorology and Air Pollution, Industrial Plant Location and City Planning.

UNIT-II (10-Lectures)

Effects of Air Pollution on Human Health, Effects of Air Pollution on Animals, Effects of Air Pollution on Plants, Economic Effects of Air Pollution.

UNIT-III (10-Lectures)

Air Pollution Sampling and Measurement: Types of Pollutant Sampling and Measurement, Ambient Air Sampling, Stack Sampling, Analysis of Air Pollutants.

UNIT-IV (10-Lectures)

Air Pollution Control Methods and Equipment: Control Methods, Source Correction Methods, Cleaning of Gaseous Effluents, Particulate Emission Control, Selection of a Particulate Collector, Control of Gaseous Emissions.

UNIT-V (10-Lectures)

Control of Specific Gaseous Pollutants: Control of Sulphur Dioxide Emission, Control of Nitrogen Oxides, Carbon Monoxide Control, Control of Hydrocarbons, Mobile Sources, Air Quality and Emission Standards.

TEXT BOOKS:

1. M.N.Rao, H.V.N. Rao, "*Air Pollution*" Tata McGraw Hill Education Private Ltd., New Delhi, 2003.
2. C.S. Rao, "*Environmental Pollution Control Engineering*", 2nd Edition, New Age International Publishers, New Delhi, 2006.

REFERENCES:

1. Mahajan S.P, "*Pollution Control in Process Industries*", Tata McGraw Hill Education Private Ltd., New Delhi, 2004.
2. Murali Krishna K.V.S.G., "*Air Pollution and Control*", Kaushal Co, Environmental Protection Society, Kakinada, India, 1995.