

BE 1st YEAR (REGULAR)
(For Semesters A: Section A-E)
CH 10081 Environmental Science

UNIT- I: Environment: General Studies

- a. Introduction, segments of environment, Energy flow in environment, Composition and structure of atmosphere. Chemical Species and particulates in atmosphere. Reaction and Phenomena occurring in atmosphere.
- b. Man and Environment

Unit II: AIR Pollution

- a. Air pollution: Sources and effects, particulate control, control of gaseous pollutants (SO_x, NO_x, oxides of carbon, hydrocarbon pollutants), Air Quality standards and Management.
- b. Case studies

UNIT- III : Water Pollution

- a. Water Pollution: Types of water pollution, sources, water pollution control. Waste water treatment technologies and Recycle.
- b. Case studies.

UNIT- IV: Soil and Noise Pollution

- a. Soil Pollution: Introduction, sources/causes, effects and control.
- b. Noise Pollution: Introduction, sources/causes, effects and control, noise measuring instruments and noise pollution control technology.

UNIT- V: Environment, Society and Ethics

- a. Society and Environment, Solid waste-types, impact on society, solid waste management, specific applications to solid waste management.
- b. Environmental Ethics: Need and Types, Regulations: ISO 14000, 9000, pollution Acts and Regulations. Environmental Auditing

Text Books:

1. S.C. Bhatia, "Environmental Pollution and control in chemical process industries", Khanna Publishers, 1st edition, 2001.
2. C.S.Rao, "Environmental Pollution Control Engineering", Wiley Eastern, 1992.

Reference Books:

1. S.P.Mahajan, "Pollution control in Process Industries", Tata McGraw Hill, 1990.
2. F. P. Lees, "Loss prevention in process industries", 2nd edition., Butter worth-Heinemann, 1996.
3. Martin Crawford, "Pollution Control Theory", McGraw Hill, 1976.
4. Marell, "Solid Wastes", John Wiley, 1975.