

2.17 30517 ENVIRONMENTAL SAFETY

UNIT-1

- 1.1 Air pollutants, Pollution sources, automobile pollution-hazards of air pollution,
- 1.2 Concept of clean coal combustion technology, fly ash, control of combustion in combustion chambers,
- 1.3 Ultra violet radiation, infrared radiation, radiation from sun, hazards due to depletion of ozone,
- 1.4 Deforestation ozone holes-automobile exhausts, chemical factory stack emissions, CFC

UNIT-2

- 2.1 Water pollutants, health hazards, sampling and analysis of water, water treatment, different industrial effluents and their treatment and disposal, advanced wastewater treatment.
- 2.2 Effluent quality standards and laws, chemical industries, tannery, textile effluents, common treatment.

UNIT-3

- 3.1 Hazardous waste management in India, waste identification, characterization and classification technological options for collection,
- 3.2 Treatment and disposal of hazardous waste selection charts for the treatment of different hazardous wastes,
- 3.3 Methods of collection and disposal of solid wastes, health hazards, toxic and radioactive wastes incineration and verification,
- 3.4 Hazards due to bio, process, dilution, standards and restrictions, recycling and reuse.

UNIT-4

- 4.1 Sampling and analysis, dust monitor, gas analyzer, particle size analyzer, lux meter-pH meter, gas chromatograph,
- 4.2 Atomic absorption spectrometer, Gravitational settling chambers, cyclone separators-scrubbers electrostatic precipitator,
- 4.3 Bag filter, maintenance, control of gaseous emission by adsorption, absorption and combustion methods,
- 4.4 Pollution Control Board-laws, Pollution control in process industries like cement, paper, petroleum,
- 4.5 Petroleum products textile tanneries, thermal power plants, dying and pigment industries, ecofriendly energy

Reference Book:

1. Industrial Safety, Health and Environment Management Systems Paperback by R. K. Jain (Author), Sunil S. Rao (Author)