

M.Sc. Environmental Science

Semester-III

SOLID WASTE MANAGEMENT

Unit-I

Solid Waste: Overview of different solid waste, sources and properties of solid waste, sampling and characterization of solid waste, Material flow in society, day to day management of solid waste.

Unit-II

Solid waste management: solid waste generation, Solid waste handling, storage, processing, collection, transfer and transport, material recovery, energy recovery (biological and thermal).

Unit-III

Integrated solid waste management: Introduction, life cycle, generation sources, stakeholder's management perspectives, benefits and need for integrated solid waste management, Case studies. Reduction in raw material usage, reduction in solid waste quantities (municipal and industrial wastes), reuse of solid waste material, Health and environmental issues related to solid waste.

Unit-IV

Municipal solid waste (management and handling) rules, Ultimate disposal: Landfill for solid wastes, leachate collection and removal, landfill covers, Incineration. Current issues in solid waste management: Life cycle analysis and management, public and private ownership and operation, financing solid waste facilities.