

AMEV13 MUNICIPAL SOLID WASTE MANAGEMENT

UNIT-1 SOURCES AND TYPES

- 1.1 Sources and types of municipal solid wastes-waste generation rates-factors affecting generation,
- 1.2 Characteristics-methods of sampling and characterization;
- 1.3 Effects of improper disposal of solid wastes-Public health and environmental effects.
- 1.4 Elements of solid waste management- Social and Financial aspects
- 1.5 Municipal solid waste (M&H) rule- integrated management-Public awareness;
- 1.6 Role of NGO"s.

UNIT-2 ON-SITE STORAGE AND PROCESSING

- 2.1 On-site storage methods- Effect of storage,
- 2.2 Materials used for containers- segregation of solid wastes- Public health and economic aspects of open storage- waste segregation and storage
- 2.3 Case studies under Indian conditions- source reduction of waste- Reduction, Reuse and Recycling.

UNIT-3 COLLECTION AND TRANSFER

- 3.1 Methods of Residential and commercial waste collection- Collection vehicles- Manpower- Collection routes- Analysis of collection systems;
- 3.2 Transfer stations- Selection of location, operation & maintenance;
- 3.3 Options under Indian conditions- Field problems- solving.

UNIT-4 OFF-SITE PROCESSING

- 4.1 Objectives of waste processing- Physical Processing techniques and Equipments;
- 4.2 Resource recovery from solid waste composting and biomethanation;
- 4.3 Thermal processing options- case studies under Indian conditions.

UNIT-5 DISPOSAL

- 5.1 Land disposal of solid waste;
- 5.2 Sanitary landfills- site selection, design and operation of sanitary landfills- Landfill liners
- 5.3 Management of leachate and landfill gas Landfill bioreactor
- 5.4 Dumpsite Rehabilitation

References Books

1. Manual on Municipal Solid Waste Management, CPHEEO, Ministry of Urban Development, Government of India, New Delhi, 2000.
2. Bhide A.D. and Sundaresan, B.B. Solid Waste Management Collection, Processing and Disposal, 2001
3. Manser A.G.R. and Keeling A.A, "Practical Handbook of Processing and Recycling of Municipal solid Wastes", Lewis Publishers, CRC Press, 1--6