

LESSON PLAN

NAME OF FACULTY:- MAHENDER SINGH

SUBJECT:- SOLID WASTE MANAGEMENT

BRANCH:- CIVIL ENGG.

SEMESTER:- 5TH

DURATION:- 13 WEEKS (2024-25)

Sno.	theory	
	lecture	Topic
1.	1.	Definition of solid waste, different solid waste – domestic Waste, commercial waste, industrial waste, market waste, agricultural waste, biomedical waste, E-waste, hazardous waste, institutional waste, etc.
	2.	Sources of solid waste, Classification of solid waste – hazardous and non- hazardous waste
	3.	revision
2.	1.	Physical and chemical characteristics of municipal solid waste.
	2.	Storage, Collection and Transportation of Municipal Solid Waste
	3.	revision
3.	1.	Collection, segregation, storage and transportation of solid waste
	2.	Tools and Equipment - Litter Bin, Broom, Shovels, Handcarts, Mechanical road sweepers, Community bin - like movable and stationary bin.
	3.	Revision
4.		1ST SESSIONAL TEST
5.	1.	Transportation vehicles with their working capacity -Animal carts, Auto vehicles, Tractors or Trailers, Trucks, Dumpers, Compactor vehicles. Transfer station- meaning, necessity, location
	2.	Role of rag pickers and their utility for society.
	3.	revision
6.	1.	Concept of composting of waste, Principles of composting process. Factors affecting the composting process.
	2.	Methods of composting – Manual Composting – Bangalore method, Indore Method, Mechanical Composting – Dano Process, Vermi composting.
	3.	Revision
7.	1.	Solid waste management techniques – solid waste management hierarchy, waste prevention and waste reduction techniques
	2.	Land filling technique, Factors to be considered for site selection, Land filling methods-Area method, Trench method and Ramp method, Leachate and its control, Biogas from landfill, Advantages and disadvantages of landfill method, Recycling of municipal solid waste
	3.	Revision
8.		2ND SESSIONAL TEST
9.	1.	Incineration of waste: Introduction of incineration process,
	2.	Types of incinerators - Flash, Multiple chamber Incinerators,
	3.	Revision
10.	1.	Products of incineration process with their use, Pyrolysis of waste – Definition, Methods.
	2.	Definition of Bio medical Waste.
	3.	Revision
11.	1.	Sources and generation of Biomedical Waste and its classification
	2.	Bio medical waste Management technologies.
	3.	revision
12.	1.	Definition, varieties and ill effects of E- waste
	2.	Recycling and disposal of E- waste.
	3.	Revision
13.		3RD SESSIONAL TEST