

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-IV EXAMINATION – SUMMER 2025****Subject Code:3141311****Date:17-05-2025****Subject Name: Municipal & Industrial Solid Waste Management****Time: 10:30 AM TO 01:00 PM****Total Marks:70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1	(a) Define the terms: (1)Integrated Solid Waste Management (2) Composting (3) Leachate	03
	(b) Write down the significance of solid waste processing	04
	(c) Write down the most important functional elements of Solid Waste Management System.	07
Q.2	(a) Draw the flowchart of material flow and solid waste generation.	03
	(b) Explain the terms: proximate analysis and ultimate analysis.	04
	(c) Enlist and Explain the factors affect on the generation rate of Municipal Solid Waste.	07
	OR	
	(c) Explain factors that should be considered in the on-site storage of solid waste.	07
Q.3	(a) What do you mean by Refused Derive Fuel (RDF)?	03
	(b) Differentiate between reuse and recycle.	04
	(c) Explain Haul Container system with neat sketch.	07
	OR	
Q.3	(a) Calculate solid waste generation per annum of a city having population 2 lakh and per capita generation rate of solid waste is 0.625 kg / day.	03
	(b) Write briefly about the need of Transfer Station.	04
	(c) Explain Stationary Container system with neat sketch.	07
Q.4	(a) Discuss the post closure care and use of old landfill.	03
	(b) Discuss the sitting criteria for municipal solid waste landfill.	04
	(c) Enlist the Different methods used for the treatment of Bio-Medical Waste. Explain in detail.	07
	OR	
Q.4	(a) Categorize Landfill Liner system.	03
	(b) Write a short note on Leachate & its Management	04
	(c) Enlist the categories of bio medical waste.	07
Q.5	(a) Write down the advantages and disadvantages of sanitary landfill.	03
	(b) Write a short note on energy from MSW	04
	(c) Name the thermal waste treatment technologies & explain any one in detail.	07
	OR	
Q.5	(a) Enlist properties of Hazardous waste.	03
	(b) Differentiate between sanitary & secured landfill sites for waste disposal.	04

(c) Explain the transfer and transport of hazardous waste with manifest system

07
