Enrolment No./Seat No_____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VI EXAMINATION – SUMMER 2025

Subject Code: 3160515 Date:26-05-2025

Subject Name: 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)**	List different sources of Solid Waste.	**03**
	(b)	Explain the functional elements of municipal solid.	**04**
	(c)	Describe the physical and chemical properties of municipal solid waste.	**07**
Q.2	**(a)**	Define(i)Rubbish(ii)Garbage(iii)Ash	**03**
	(b)	Explain hierarchy of Solid waste management.	**04**
	(c)	Discuss plastic waste disposal and its necessary equipment.	**07**
		OR	
	(c)	Describe and Differentiate Hauled container system and Stationery container system with schematic diagram	**07**
Q.3	**(a)**	Enlist the types of Landfills.	**03**
	(b)	State various leachate treatment methods.	**04**
	(c)	Describe with sketch the well system for recovery of gases in landfills	**07**
		OR	
Q.3	**(a)**	Explain Segregation	**03**
	(b)	Write a note on Incineration & Pyrolysis.	**04**
	(c)	Give an overview of municipal solid waste management Plan in Urban area.	**07**
Q.4	**(a)**	List the factors to be considered for efficient collection system.	**03**
	(b)	Discuss the waste minimization techniques at source.	**04**
	(c)	Discuss various collection methods of solid waste management system.	**07**
		OR	
Q.4	**(a)**	List various points to be considered while choosing the collection route of vehicle to pick up solid waste.	**03**
	(b)	Enlist the factors to be considered in determining the size of collection and transportation vehicles	**04**
	(c)	Discuss the risk assessment associated with solid waste management system	**07**
Q.5	**(a)**	Enlist guidelines on Extended Producer Responsibility	**03**
	(b)	Explain in brief landfill closure and remediation	**04**
	(c)	Discuss Laws for solid waste management	**07**
		OR	
Q.5	**(a)**	List the parameters affecting the compost process	**03**
	(b)	Explain Area and Trench methods of land filling	**04**
	(c)	Describe the techniques of Energy recovery from solid waste.	**07**

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