

**GUJARAT TECHNOLOGICAL UNIVERSITY**

**BE- SEMESTER-VI EXAMINATION – WINTER 2025**

**Subject Code: 3160515**

**Date: 19-11-2025**

**Subject Name: Solid waste Management**

**Time: 02:30 PM TO 05:00 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.

	<b>MARKS</b>
<b>Q.1</b> (a) Explain the need for Solid waste management.	<b>03</b>
(b) Draw the pie chart of composition of solid waste management in India.	<b>04</b>
(c) Describe problems and issues of solid waste management	<b>07</b>
<b>Q.2</b> (a) Enlist the various solid waste types.	<b>03</b>
(b) Describe operations of pollution control facilities	<b>04</b>
(c) Explain in brief about the Biomedical waste-generation and its management.	<b>07</b>
<b>OR</b>	
(c) Explain in brief about the E-waste-generation and its management.	<b>07</b>
<b>Q.3</b> (a) Draw Integrated Solid Waste Management Hierarchy	<b>03</b>
(b) Enlist the advantages of EPR systems.	<b>04</b>
(c) Give an overview of developing a municipal solid waste management Plan in an Urban Local Body (ULB).	<b>07</b>
<b>OR</b>	
<b>Q.3</b> (a) Explain segregation and storage in solid waste management.	<b>03</b>
(b) What are the elements of Overall Cost Assessment (Full Cost Accounting) in solid waste management?	<b>04</b>
(c) Enlist all seven step approach for municipal solid waste Management Planning.	<b>07</b>
<b>Q.4</b> (a) Explain collection and transportation in solid waste management.	<b>03</b>
(b) Explain decentralized solid waste management systems.	<b>04</b>
(c) Enlist criteria for identifying suitable land for sanitary landfill sites	<b>07</b>
<b>OR</b>	
<b>Q.4</b> (a) What are advantages of recycling?	<b>03</b>
(b) State various methods of composting.	<b>04</b>
(c) Explain Leachate Management in detail	<b>07</b>
<b>Q.5</b> (a) Explain RDF.	<b>03</b>
(b) What are various treatment methods of solid waste?	<b>04</b>
(c) Illustrate the sequence of steps for conducting an Environment Impact Assessment (EIA)	<b>07</b>

**OR**

- Q.5** (a) What are the options for plastic waste management? **03**  
(b) Give classification of plastics as per BIS **04**  
(c) List all the important Policy Landmarks and Initiatives by Government of India on Solid Waste Management. **07**

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