

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-V (NEW) EXAMINATION – WINTER 2018****Subject Code:2151307****Date:04/12/2018****Subject Name:Municipal and 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.

- Q.1** (a) Enlist various sources of Solid waste. **03**  
(b) Explain Integrated Solid Waste Management. **04**  
(c) Enlist & explain the factors affecting generation of MSW. **07**
- Q.2** (a) What do you mean by Composting? **03**  
(b) How On-site processing of Solid waste at household level can be done? **04**  
(c) Describe Haul container system in detail. **07**
- OR**
- (c) Explain Material flow & Waste generation in society. **07**
- Q.3** (a) How much waste per annum will be generated from a town having population of 1 lac at a rate of 0.4kg/cap/day? **03**  
(b) Differentiate between Reuse and Recycle. Give examples of each. **04**  
(c) Enlist & explain types of shredder used for MSW processing. **07**
- OR**
- Q.3** (a) What are important considerations for storage of MSW? **03**  
(b) How Plastic waste can be managed? **04**  
(c) Enlist & explain types of screens used for separation of MSW. **07**
- Q.4** (a) What do you mean by curbside collection of MSW? **03**  
(b) Which are the important criteria for Landfill siting? **04**  
(c) Write a short note on Energy recovery from MSW. **07**
- OR**
- Q.4** (a) Give expression for measuring Moisture content of MSW? **03**  
(b) Which are considerations for post-closure care of Landfill? **04**  
(c) Describe process of Methane generation by Anaerobic Digester. **07**
- Q.5** (a) What do you mean by Leachate? **03**  
(b) Draw neat sketch of various Landfill Liner systems. **04**  
(c) Enlist and explain categories of Biomedical waste. **07**
- OR**
- Q.5** (a) Enlist properties of Hazardous waste. **03**  
(b) Draw schematic diagram of Engineered Landfill site. **04**  
(c) Explain the transfer and transport of Hazardous waste with manifest system. **07**

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