

**GUJARAT TECHNOLOGICAL UNIVERSITY****M. E. - SEMESTER – II • EXAMINATION – WINTER • 2014****Subject code: 1721704****Date: 04-12-2014****Subject Name: Solid Waste Management****Time: 02:30 pm - 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.

- Q.1 (a)** Discuss various types of solid waste. Mention different aspects of managing them. **07**
- (b)** Discuss the factors affecting generation of municipal solid waste. Explain the procedure for analysis of solid waste collected from community storage. **07**
- Q.2 (a)** Compare "house to house collection" with "community storage collection" facility for municipal solid waste. **07**
- (b)** Suggest an ideal communal storage for municipal solid waste and justify your suggestion. **07**
- OR**
- (b)** Discuss in brief the flow chart of solid waste collection processes. **07**
- Q.3 (a)** Suggest Vehicles and mode of refuse collection in a metro city. **07**
- (b)** Sketch and explain various size reduction techniques. **07**
- OR**
- Q.3 (a)** Enlist different component separation techniques and discuss any one in details. **07**
- (b)** Discuss "Electrostatic separation". **07**
- Q.4 (a)** Discuss "incineration of solid waste as ultimate treatment and also discuss operational parameters of incineration. **07**
- (b)** Enlist the factors favouring composting of municipal solid waste. Discuss its advantages. **07**
- OR**
- Q.4 (a)** Discuss effect of thermal flux on products of pyrolysis. **07**
- (b)** Sketch and discuss different types of grates used in incineration. **07**
- Q.5 (a)** Discuss various parameters affecting composting. **07**
- (b)** Explain "Windrowing". **07**
- OR**
- Q.5 (a)** Discuss "important parameters of sanitary land fill. **07**
- (b)** Explain "gas and leachate movement and control in sanitary land fill. **07**

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