

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. Sem. – IInd - Examination – June/July- 2011

Subject code: 1721704

Subject Name: Solid Waste Management

Date: 27/06/2011

Time: 10:30 am – 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) What are the types of solid waste? Discuss the factors affecting generation rate of solids waste. 07
- (b) Discuss the method of analysis of solid waste collected at communal storage place. 07

- Q.2 (a) What are the various factors affecting frequency of collection of solid waste? Discuss different alternatives of communal storage facilities provided by municipal authorities. 07
- (b) Sketch and explain “WHO recommended communal storage” for developing countries. 07

OR

- (b) Discuss, refuse collection vehicles of different types. 07

- Q.3 (a) Enlist various processing techniques for solid waste. Explain size reduction equipments for solid waste. 07
- (b) What is component separation? Discuss “Air Separation”. 07

OR

- Q.3 (a) Discuss “Magnetic Separation” technique for solid waste. 07
- (b) Discuss “Electrostatic Separation” and “Optical Separation” technique for solid waste. 07

- Q.4 (a) Explain pyrolysis of solid waste. Discuss the effects of thermal flux on pyrolysis. 07
- (b) Sketch and explain various types of furnaces and grates employed for incineration of solid waste. 07

OR

- Q.4 (a) What is incineration? Discuss the operational parameters of incineration of solid waste. 07
- (b) Sketch and explain various methodology of pyrolysis. 07

- Q.5 (a) What is composting? What are the advantages and disadvantages of composting of municipal solid waste? Compare aerobic and anaerobic composting. 07
- (b) Describe different methods of sanitary land fill. 07

OR

- Q.5 (a) What is sanitary land fill? What are its main features? Compare its advantages and disadvantages. 07
- (b) Discuss various parameter affecting composting 07
