

**5E3158****5E3158**

B.Tech. (Sem.V) (Main/Back) Examination- Dec. 2012

Civil Engineering

5CE6.3 Soild Waste Management

Time : 3 Hours]

[Total Marks : 80  
[Min. Passing Marks : 24*Instructions to Candidates :**Attempt any five questions, selecting one question from each unit. All questions carry equal marks. Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.***UNIT - I**

1. (a) What are the goals and objectives of solid waste management? (8)  
(b) Describe various factors influencing generation of solid waste. (8)

**ORz**

1. (a) State the classification of solid waste and give characteristics of municipal solid waste. (8)  
(b) Discuss the various problems associated with solid waste disposal. (8)

**UNIT - II**

2. (a) Discuss the effects of open dumping of solid waste on public health and aesthetics. (8)  
(b) Discuss on-site processing methods used for solid waste. (8)

**OR**

2. (a) Discuss various methods used for on-site storage of solid waste. (8)  
(b) How you decide the locations of community containers for storage of municipal solid waste. (8)

**UNIT - III**

3. (a) What are the various collection systems used for solid waste. (8)  
(b) Discuss the criteria for deciding the collection route of vehicle to pick up solid waste. (8)

**OR**

3. (a) Discuss the equipments and labor requirement for the collection and transport of solid waste. (8)  
(b) What is the need for transfer station? State various facilities provided at transfer station (8)

**UNIT - IV**

4. (a) Discuss in brief various methods used for the disposal of solid waste. (8)  
(b) Describe the various components of an engineered landfill. (8)

**OR**

4. (a) Discuss in brief various methods used for composting. (8)  
(b) Describe various bioremediation techniques used for solid waste disposal. (8)

**UNIT - V**

5. (a) Discuss various methods used for the treatment and disposal of industrial solid waste. (8)  
(b) Discuss various techniques used for the generation of energy from solid waste. (8)

**OR**

5. Write short notes on any four of the following :  
(a) Material recovery from solid waste.  
(b) Methods used for reducing the generation of solid waste from industries.  
(c) Nature of solid waste generated from industries.  
(d) Recovery of energy and material.  
(e) Disposal of industrial solid waste.  
(f) Sanitary landfill.

(16)