

5E5068

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B.Tech. V Semester (Main/Back) Examination, Nov./Dec. - 2017  
Civil Engineering  
5CE6.3A Solid Waste Management

Time : 3 Hours

Maximum Marks : 80

Min. Passing Marks : 26

**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 suitable be assumed and stated clearly). Units of quantities used/calculated must be stated clearly.*

**Unit - I**

1. a) What are the main problems associated with solid waste disposal? (8)  
b) Explain the classification of solid waste. (8)

OR

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

**Unit - II**

2. a) What do you mean by onsite handling of solid waste? How is the aspect of public health and aesthetics related to it? (8)  
b) What are the different types and materials used for storage containers? Explain with suitable sketches. (8)

OR

2. a) Explain the onsite processing methods used for solid waste. (8)  
b) How do we decide the location of containers? Write down the precautions and guidelines for this purpose. (8)

### Unit - III

3. a) What are the important steps in collection and transfer system design? (8)  
b) Explain the equipment and labour requirement in reference to solid waste management. (8)

OR

3. a) Explain various methods of collection system with flow diagrams. (8)  
b) What are the different types of vehicles being used in for collection systems? (8)

### Unit - IV

4. What do you understand by sanitary land filling? How is it different from a normal land filling? How is it practiced? Explain the filling process with a neat sketch. (16)

OR

4. Describe in detail the different processing techniques and methods of solid waste disposal with neat sketches. (16)

### Unit - V

5. a) Explain the special techniques of treatment for industrial solid waste. (8)  
b) Describe the reuse and recycling of solid waste materials. (8)

OR

5. a) How is the nature, treatment and disposal of industrial solid waste different than the municipal solid waste? (8)  
b) Explain various methods of energy recovery from solid waste. (8)

