

5E5068

Roll No. \_\_\_\_\_

Total No of Pages: 3

**5E5068**

**B. Tech V Sem. (Main/Back) Exam. Nov-Dec. 2015**

**Civil Engineering**

**5CE6.3A Solid Waste Management**

**Time: 3 Hours**

**Maximum Marks: 80**

**Min. Passing Marks Main: 26**

**Min. Passing Marks Back: 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.*

*Use of following supporting material is permitted during examination.*

1. NIL

2. NIL

**UNIT-I**

Q.1 (a) Describe the environmental concerns of solid waste disposal sites. [8]

(b) Describe the factors that affect generation of solid waste. How the per capita generation of waste differs from place to place? [8]

**OR**

Q.1 (a) Describe the various types of classifications of solid waste. [8]

(b) What are the physical and chemical characteristics of solid waste and how do they affect the management of solid waste? [8]

[5E5068]

Page 1 of 3

[8380]

**UNIT-II**

- Q.2 (a) Describe the methods of solid waste management for aesthetical handling for the protection of public health. [8]  
(b) Describe various types of dust bins and community containers. [8]

**OR**

- Q.2 (a) Describe the process of onsite handing of solid waste. [8]  
(b) What are the onsite processing methods and what is the significance of onsite processing? [8]

**UNIT-III**

- Q.3 (a) What are the key steps in collection and transfer system design? [8]  
(b) What are the factors to be considered in selecting solid waste collection equipment? [8]

**OR**

- Q.3 (a) How do we design a transfer station and determine its capacity? [8]  
(b) Compare the various collection and transfer alternatives for solid waste management. [8]

**UNIT-IV**

- Q.4 (a) Describe the design and operation of a sanitary land fill with a neat sketch. [8]  
(b) Describe various techniques of waste processing and methods of disposal. [8]

**OR**

- Q.4 (a) Describe incineration. What are the merits of incineration? [8]  
(b) Describe the various types of bio remediation and their advantages. [8]

**UNIT-V**

- Q.5 (a) Describe the calorific value and moisture content of some constituents of solid waste and their effect on energy recovery. [8]
- (b) Describe the ways of reuse of waste in industry and its limitation. [8]

**OR**

- Q.5 (a) What are the special techniques of treatment for industrial solid waste? [8]
- (b) Describe suitable disposal methods for industrial solid waste and differentiate them with municipal solid waste disposal. [8]