5E5068

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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]

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 same 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]
