

Code: CE7T5D

**IV B.Tech - I Semester – Regular/Supplementary Examinations
October - 2019**

**SOLID WASTE MANAGEMENT
(CIVIL ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

PART – A

Answer *all* the questions. All questions carry equal marks

11 x 2 = 22 M

1. a) Illustrate the importance of segregation in solid waste collection.
- b) List the materials recovered from solid waste.
- c) Explain the process of pyrolysis.
- d) Why incineration is suitable for bio-medical waste?
- e) What are the drawbacks of composting?
- f) List the advantages of mechanical volume reduction.
- g) List the sources of E-waste.
- h) Explain the methods of quantification of solid waste.
- i) Draw the flowchart indicating the process involved in Solid waste management.
- j) What is sanitary landfill?
- k) Explain the need for Transfer station in solid waste handling and transportation.

PART – B

Answer any **THREE** questions. All questions carry equal marks.

3 x 16 = 48 M

2. a) List the various sources of solid waste along with type of waste they generate. 8 M
b) Enumerate the on-site options available under Indian conditions for waste volume reduction? 8 M
3. a) Discuss various types of vehicles used for transportation of solid waste with their advantages and disadvantages. 8 M
b) Recommend the criteria for site selection of a Transfer station in Solid waste management. 8 M
4. a) Discuss the process of thermal volume reduction of solid waste. 8 M
b) What do you understand by the term Leachate? What are the problems posed by Leachate and how would you overcome them? 8 M
5. a) Describe various types of incinerations and the factors affecting their efficiency. 8 M
b) Illustrate the anaerobic methods for materials recovery and treatment. 8 M
6. a) List the types of plastic waste and describe the suitable ways of handling them. 8 M
b) List the health hazards of E-waste if not disposed scientifically. 8 M