

B.E/B.TECH Degree Examination, December 2020  
Seventh Semester  
**CE16006-MUNICIPAL SOLID WASTE MANAGEMENT**  
(Regulation 2016)

Time: Three hours

Maximum : 80 Marks

Answer **ALL** questions

**PART A - (8 X 2 = 16 marks)**

1. The term municipal solid waste is generally used to describe
  - a) Waste from industrial processes, construction and demolition debris.
  - b) Waste from private homes, commercial establishments and institutions
  - c) Mining waste
  - d) Agricultural Waste
2. Which of the following statement regarding recycling is wrong?
  - a) Saves precious resources
  - b) Require stable market
  - c) Improves efficiency of treatment processes
  - d) Increases the needs for mining virgin materials
3. Curbside pick-up facility is provided for
  - a) Single residences
  - b) Medium rise-apartments
  - c) High rise-apartments
  - d) Institutional
4. The method of refuse treatment, involving windrow is called
  - a) Incineration
  - b) Pulverization
  - c) Composting
  - d) None of these
5. Write short notes on container locations.
6. Distinguish between transfer and transport of Solid Waste.
7. Write the merits and demerits of incineration.
8. List the adverse effects of open land dumping of solid waste.

**PART B - (4 X16 = 64 marks)**

09. (a) (i) Explain the various factors influencing the generation of solid waste. (10)  
 (ii) Write short notes on hazardous waste. (6)

**(OR)**

- (b) (i) Estimate the moisture content of a solid waste sample with the following composition. Assume 100 kg sample of waste. (8)

S.No.	Component	% by mass	% of Moisture content
1.	Food waste	15	70
2.	Paper	45	6
3.	Cardboard	10	5
4.	Plastics	10	2
5.	Garden Trimming	10	60
6.	Wood	5	20
7.	Tin cans	5	3

- (ii) Write a detailed note on Solid Waste sources in urban Centres. (8)

10. (a) Explain in detail about the factors to be considered in on-site storage. (16)

**(OR)**

- (b) Segregation of solid wastes at source is the key to waste management – Explain with help of a case study. (16)

11. (a) Discuss the present scenario in collection of Municipal Solid Waste. (16)

**(OR)**

- (b) Discuss in detail the procedure adopted to identify the optimal routing for secondary collection of solid waste. (16)

12. (a) Explain the factors influencing the process of composting. State the various practical problems associated with it. (16)

**(OR)**

- (b) Explain with the neat sketch of the pyrolysis process of thermal treatment of municipal solid waste. (16)