SRM INSTITUTE OF SCIENCE AND TECHNOLOGY
COLLEGE OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF CIVIL ENGINEERING

A

Continuous Learning Assessment	**: CLA-2**	**Date**	**: 10.04.2023**
Course Code & Course Name	**: 18CEO306T Municipal Solid Waste Management**	**Duration**	**: 90 minutes**
Year / Semester	**: III/ VI**	**Maximum Marks**	**: 50**
Academic year	**: 2022 - 2023 (Even Semester)**	**Mode of Exam**	**: Offline**

Course Articulation Matrix

Course Learning Outcomes (CLO):		Engineering Knowledge	Problem Analysis	Design & Development	Analysis, Design, Research	Modern Tool Usage	Society & Culture	Environment & Sustainability	Ethics	Individual & Team Work	Communication	Project Mgt. & Finance	Life Long Learning	PSO - 1	PSO - 2	PSO - 3
CO-1 :	Recognize the various sources of solid and hazardous waste	3	-	-	-	-	2	3	-	-	-	-	-	3	-	-
CO-2 :	Identify the options for Reduction, reuse and recycling of waste	3	-	-	-	-	2	3	-	-	-	-	-	3	-	-
CO-3 :	Analyze the collection and transport of solid and hazardous waste	3	-	-	-	-	2	3	-	-	-	-	-	3	-	-
CO-4 :	Recognize the various waste processing techniques	3	-	-	-	-	2	3	-	-	-	-	-	3	-	-
CO-5 :	Identify the waste disposal methods and management	3	-	-	-	-	2	3	-	-	-	-	-	3	-	-

Qn. No.	**Question**	**Marks**	**BL**	**CO**	**PO**	**PI**
PART A : Answer all the questions(10 × 1 = 10 Marks)						
1	In the waste management hierarchy , which is top most preference a. Source reduction b. Recycling c. Energy recovery d. Disposal	1	1	2	1	1.3.1
2	Example for Recyclable dry waste for a. Hazardous chemicals b. Foam materials c. Newspapers d. Food containers	1	1	2	7	7.1.1
3	Solid waste Generation (kg/percapita/day) in high income countries in the range of a. 0.4 – 0.6 b. 0.5 – 0.9 c. 0.7 – 1.8 d. 0.1 – 0.4	1	3	2	1	1.2.1
4	According to CPHEEO in the year 2000 , Residential refuse generation in India (kg/percapita/day) a. 0.3 – 0.6 b. 0.1 – 0.2 c. 0.05 – 0.2 d. 0.05 – 0.1	1	4	2	7	7.1.1
5	The simple emptying method is used for the removal of a. House hold and small commercial waste b. Sludge waste c. Bulky goods d. Extra large particles	1	1	2	1	1.2.1
6.	The capacity of small transfer station was a. < 100 tonnes/day b. > 100 tonnes/day c. 500 tonnes/day d. 400 tonnes/day	1	2	3	7	7.1.1
7	The containers used in exchange waste collection method must have a	1	3	3	1	1.2.1

	minimum capacity of a. 1 m^3 b. 2 m^3 c. 4 m^3 d. 7 m^3					
8	Storage containers are used for contents to be directly transferred to a processing plant or disposal site is called a. Stationary containers b. Hauled containers c. Ground containers d. Fixed containers	1	3	3	1	1.2.1
9	Which is not a factor affecting collection frequency? a. cost b. storage space c. sanitation d. efficiency	1	3	3	1	1.2.1
10	The quantities of MSW generated and collected vary a. Daily, weekly and monthly b. Daily c. Weekly d. Monthly	1	2	3	1	1.3.1
PART B: Answer any four questions (4 × 4 = 16 Marks)						
11	What are the factors involved under material recovery facilities?	4	1	2	6	6.1.1
12	Write a short note on collection vehicle routing.	4	3	2	7	7.1.1
13	What are the factors that affect the waste collection system?	4	1	3	6	6.1.1
14	Write a short note on special waste collection system.	4	2	3	7	7.1.1
15	Differentiate between Stationary containers and Hauled containers in waste collection system.	4	2	3	7	7.1.1
PART C : Answer any one question (2 × 12 = 24 Marks)						
16.a	Explain the onsite segregation and resource recovery of solid wastes.	12	3	2	6	6.1.1
	OR					
16.b.	Write about the recycling process, requirements and its significance in solid waste management.	12	3	2	6	6.1.1
17.a.	Describe the steps to design the waste collection system.	12	3	3	7	7.1.2
	OR					
17.b.	Explain the different transfer stations and its design considerations.	12	3	3	7	7.1.2

----------ALL THE BEST ----------