

**CERTIFICATE IN SOLID WASTES
TREATMENT TECHNIQUES (CSWATT)**

Term-End Examination

December, 2021

**BWA-002 : SOLID WASTES COLLECTION
AND TRANSPORTATION**

Time : 3 hours

Maximum Marks : 70

Note : *Attempt any **seven** questions. All questions carry equal marks. Use of calculator is allowed.*

1. What are the various components of a waste collection system ? Explain briefly. 10

2. Distinguish between direct collection and two-stage collection system. 10

3. What is the purpose of hand tools, hand carts and litter bins that are used in waste collection and transportation ? Explain. 10

4. Using the following data, evaluate the solid waste generation rate per week for a city residential area that consists of 5000 homes. Given data is collected from local transfer station and observation period was one week. Assume approximately 2 adults and 1 child per home. (2.5 people per home) 10

| Vehicle | No. of Trips | Volume (m ³) | Specific wt/ density kg/m ³ |
|---------|--------------|--------------------------|---|
| 1 | 15 | 10 | 280 |
| 2 | 20 | 8 | 210 |
| 3 | 25 | 12 | 320 |

5. Discuss different types of compaction vehicles used in collection of solid wastes. 10
6. How does frequency of waste collection relate to the cost, health and safety and effectiveness of waste management ? Explain. 10
7. How can cost accounting of waste management help authorities ? Discuss briefly. 10
8. What are the different methods of segregated collection and transportation ? Write briefly. 10
9. What are the equipments and vehicles used for the secondary storage of waste ? Explain briefly. 10
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