

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

Term-End Examination

December, 2023

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

Time : 3 Hours

Maximum Marks : 70

Note : (i) Attempt any **seven** questions only.
(ii) All questions carry equal marks.

1. Discuss, in detail the categorization of 'on the street collection' of solid waste. 10
2. What are the requirements of a good container for waste collection ? Also, discuss the characteristics of materials used for these containers. 10
3. What does the term 'Compaction Vehicle' stand for ? Describe the rear-loading compaction plate compactors vehicle in detail. 10

4. Compare among manual, semi-automated, automated and bin based method of waste collections on the basis of cost, health safety, efficiency and environmental appropriateness. 10
5. Discuss, in detail about the primary and secondary collection of solid wastes. 10
6. Explain about various components of investment costs for waste management plan. 10
7. Explain the basic 8-step planning model for solid waste transportation. 10
8. What is tipping fees ? Describe the Income and Expenditure Approach (IEA) for calculating the tipping fees. 10
9. Write short notes on the following : 5 each
 - (a) Two wheeled tractors (power tillers) waste collection vehicle
 - (b) Three wheeler auto-rickshaw