

Seat No. **OCT-NOV 2025 WINTER EXAMINATION****1154 B.Tech. CBCS****Sub. Name: Solid Waste Management****Sub. Code: 67569/83739/84019****Day and Date: Wednesday, 10-12-2025****Total Marks: 70****Time: 02:30 PM To 05:00 PM**

- Instructions:**
1. All questions are compulsory
  2. Assume suitable data wherever necessary and mention it boldly
  3. Draw neat labelled diagrams wherever necessary
  4. Figures to the right indicate full marks

**Special Inst.:** Q. No. 4 and Q. No. 8 are compulsory and attempt any two questions from Q.No. 1, 2, 3 and any two questions from Q. No. 5, 6, 7.

- Q1)** Answer the following questions [10]
- a. Draw a flow diagram representing the MSW management process and explain each functional element. [5]
  - b. Elaborate the goals and objective of solid waste management [5]
- Q2)** Answer the following questions [10]
- a. What is waste generation rate and explain the factors affecting MSW generation rate? [5]
  - b. What is onsite segregation of solid waste ? state its necessity. [5]
- Q3)** Answer the following questions [10]
- a. What is a transfer station? List & explain its types. [5]
  - b. Compare stationary and hauled container systems of solid waste collection [5]
- Q4)** Answer the following questions [15]
- a. Write the environmental and health impacts of improper solid waste management. [5]
  - b. Discuss the physical and chemical characteristics of municipal solid waste. [5]
  - c. What are the major unit operations used for processing of solid waste? [5]
- Q5)** Answer the following questions [10]
- a. What is sanitary landfilling? How is it different from open dumping? [5]

- b. List the methods of sanitary landfilling and explain any one with a simple sketch [5]

**Q6)** Answer the following questions [10]

- a. What is composting? Explain the phases of composting. [5]
- b. Explain the working of a mechanical composting plant. [5]

**Q7)** Answer the following questions [10]

- a. Describe the incineration process [5]
- b. Explain the different factors affecting incineration [5]

**Q8)** Answer the following questions [15]

- a. What is leachate? How is it managed and treated in sanitary landfills? [5]
- b. List and explain the different fundamental factors governing Composting process. [5]
- c. What are the site selection criteria for an incineration plant? [5]

## **End Of Question Paper**

**Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -**

This Question Paper may be distributed for following Subjects as common code.

सदरची प्रश्नपत्रिका खालील विषयांकरिता वितरित करता येईल.

- 1] (1154) B.Tech. CBCS (83739) Solid Waste Management Part 4 SEM 7
- 2] (101) Bachelor of Engineering (84019) Solid Waste Management Part 4 SEM 7
- 3] (101) Bachelor of Engineering (67569) Solid Waste Management Part 4 SEM 7