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# B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

## February / March 2024 Semester End Main Examinations

**Programme: B.E.**

**Branch: Common to all Branches**

**Course Code: 23CV1ESWMT**

**Course: Waste Management**

**Semester: I**

**Duration: 3 hrs.**

**Max Marks: 100**

**Instructions:** 1. Answer any FIVE full questions, choosing one full question from each unit.  
2. Missing data, if any, may be suitably assumed.

|   |                  |    | <b>UNIT - I</b>   |     |     |
|---|------------------|----|---|-----|-----|
| <b>Important Note:</b> Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice. | 1                | a) | Discuss the classification of solid wastes based on source and type   | CO1 | PO1 |
|   |                  | b) | Explain environmentally sound solid waste management practices.   | CO1 | PO1 |
|   |                  | c) | Explain the factors influencing the solid waste management.   | CO1 | PO1 |
|   | <b>UNIT - II</b> |    |   |     |     |
|   | 2                | a) | Explain in detail the physical and chemical characteristics of solid wastes.  | CO2 | PO1 |
|   |                  | b) | Describe the following<br>i) Waste stream assessment<br>ii) Health and Environmental effects due to waste generation. | CO2 | PO1 |
|   |                  |    | <b>UNIT - III</b>   |     |     |
|   | 3                | a) | Explain with neat sketches, hauled container System (HCS) and stationary container System (SCS) of waste collection.  | CO2 | PO1 |
|   |                  | b) | Explain with clear diagram components of landfill and factors considered for selection of suitable site for landfill. | CO2 | PO1 |
|   |                  |    | <b>OR</b>   |     |     |
|   | 4                | a) | Discuss the factors affecting the waste disposal  | CO2 | PO1 |
|   |                  | b) | Describe the Environmental effects of landfill.   | CO2 | PO1 |
|   |                  |    | <b>UNIT - IV</b>  |     |     |
|   | 5                | a) | Briefly explain mechanical volume and size reduction techniques which can be adopted in solid waste management.       | CO3 | PO1 |
|   |                  | b) | Delineate commonly recycled materials with examples and explicate the process of recycling them.                      | CO3 | PO1 |

| <b>OR</b>       |    |  |            |            |           |  |
|-----------------|----|--|------------|------------|-----------|--|
| 6               | a) | Examine the various techniques available for reduction and recovery of waste | <i>CO3</i> | <i>PO1</i> | <b>10</b> |  |
|                 | b) | Briefly explain the component separation, drying and dewatering of waste.    | <i>CO3</i> | <i>PO1</i> | <b>10</b> |  |
| <b>UNIT - V</b> |    |  |            |            |           |  |
| 7               | a) | Explain the Identification and classification of hazardous waste.            | <i>CO3</i> | <i>PO1</i> | <b>10</b> |  |
|                 | b) | Discuss the hazardous waste management in India.                             | <i>CO3</i> | <i>PO1</i> | <b>10</b> |  |

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B.M.S.C.E. - ODD SEM 2023-24