

CBCS SCHEME

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Sixth Semester B.E. Degree Examination, June/July 2024

Solid Waste Management

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. List and explain the various sources of solid wastes with their properties. (10 Marks)
- b. Define waste. Explain briefly the types of solid waste and their categorization. (10 Marks)

OR

- 2 a. Explain the amendments made in 2016, for the solid waste management 2000 rules, any five. (10 Marks)
- b. Briefly explain the steps involved in solid waste collection. (10 Marks)

Module-2

- 3 a. Define solid waste processing. What are the objectives of processing techniques. (10 Marks)
- b. Explain the design considerations for municipal solid waste incinerators. (10 Marks)

OR

- 4 a. What are the types of equipment used for compaction based on their mobility? Also explain the advantages and disadvantages associated with compaction. (10 Marks)
- b. List and explain the most frequently used shredding equipments in mechanical volume reduction with their suitability. (10 Marks)

Module-3

- 5 a. Define sanitary landfill. Explain the advantages and disadvantages of sanitary land filling in brief. (10 Marks)
- b. Briefly explain the steps involved in the design of sanitary landfill. (10 Marks)

OR

- 6 a. Define vermi – composition, with its process and factors that enhances the vermi – composting. (10 Marks)
- b. Explain mechanical composting and the steps involved in operation of mechanical composting. (10 Marks)

Module-4

- 7 a. What are the primary sources of biomedical waste? Explain the process of biomedical waste management. (10 Marks)
- b. Define E-waste. Explain the generation, composition, collection with disposal system of E-waste. (10 Marks)

OR

- 8 a. Define biomedical waste. What are the types of biomedical waste with suitable treatment and disposal option? (10 Marks)
- b. What are construction and demolition waste? Explain in brief the sources, collection, treatment and disposal of these waste. (10 Marks)

Module-5

- 9 a. What are the 3Ts used in incineration? Explain in detail the process of incineration with its objectives. (10 Marks)
- b. List and explain briefly the different types of incinerator's used in incineration process. (10 Marks)

OR

- 10 a. Explain the recycling, incineration, pyrolysis, land filling of hazardous waste. (10 Marks)
- b. Briefly explain the energy recovery techniques from the solid waste management. (10 Marks)
