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Question Paper Code	12223
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B.E. / B.Tech - DEGREE EXAMINATIONS, NOV / DEC 2023

Seventh Semester

Information Technology

(Common to Sixth Semester - Electronics and Communication Engineering)

20CYOE913 - WASTE MANAGEMENT AND RECYCLING TECHNOLOGY

(Regulations 2020)

Duration: 3 Hours

Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

- | | <i>Marks,
K-Level, CO</i> |
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| 1. What are the physical characteristics of Municipal Solid Wastes? | <i>2,K1,CO1</i> |
| 2. Define Integrated waste management. | <i>2,K1,CO1</i> |
| 3. Draw a Hierarchy of municipal solid waste management. | <i>2,K2,CO2</i> |
| 4. Outline the different on-site processes on solid wastes. | <i>2,K2,CO2</i> |
| 5. What is transfer station? How do you select the most appropriate transfer stations? | <i>2,K1,CO3</i> |
| 6. What is meant by secondary collection of solid waste? | <i>2,K1,CO3</i> |
| 7. Write the significance of C/N ratio in composting. | <i>2,K1,CO4</i> |
| 8. Summarize the merits and demerits of incineration. | <i>2,K2,CO4</i> |
| 9. List the various methods to control Leachate. | <i>2,K2,CO5</i> |
| 10. What are landfill liners? Name their types. | <i>2,K1,CO5</i> |

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

11. a) Illustrate the various sources and types of municipal solid waste. *13,K2,CO1*
- OR**
- b) Discuss the requirements and salient features of Solid waste management rules (2016). *13,K2,CO1*
12. a) Demonstrate the different options for On-site segregation of solid wastes keeping public health in mind. *13,K3,CO2*
- OR**
- b) Classify the various methods of sorting the solid waste. Describe it briefly. *13,K3,CO2*
13. a) Identify and explain the impacts on public health and economic aspects of solid waste storage. *13,K3,CO3*

OR

- b) Write down the operational sequence and maintenance of stationary and hauled container system. *13,K3,CO3*

14. a) List out and explain the techniques & equipment's used for resource recovery from solid wastes. *13,K3,CO4*

OR

- b) Examine briefly on the thermal processing options with case studies under Indian conditions. *13,K3,CO4*

15. a) Describe in detail the different methods of land filling and the operations involved with neat sketches. *13,K3,CO5*

OR

- b) Explain the various methods of leachate treatment. *13,K3,CO5*

PART - C (1 × 15 = 15 Marks)

16. a) Explain in detail about the role of NGO's in MSW. *15,K3,CO1*

OR

- b) With the help of sketches, elaborate the types and working Principle of composting methods. *15,K3,CO4*