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Question Paper Code: 99106

B.E./B.Tech. DEGREE EXAMINATION, NOV 2025

Elective

Civil Engineering

19UCE906- MUNICIPAL SOLID WASTE MANAGEMENT

(Regulations 2019)

Duration: Three hours

Maximum: 100 Marks

PART A - (5x 1 = 5 Marks)

Answer All Questions

1. Which of the following is biodegradable waste? CO1- U
(a) Polythene bag (b) synthetic fibre (c) Food waste (d) Paper
2. _____ is a liquid that passes through solid waste and extracts suspended impurities from it. CO1- U
(a) Leachate (b) Sludge (c) Distilled water (d) Municipal waste
3. Which of the following can be used as a tracking tool? CO2- U
(a) Chemical analysis (b) HWRT
(c) NPL (d) Barcoding system
4. The process of burning of municipal solid waste at high temperature is called _____. CO1- R
(a) Incineration (b) Composting (b) Landfilling (d) Shredding
5. The disposable wastes contain CO1- R
(a) Solids (b) Slurries (c) Liquids (d) All of the above

PART – B (5 x 3= 15Marks)

6. Define solid Waste Management CO1- U
7. Define Sorting. CO1- U
8. What is the Importance of on-site handling of solid waste? List the onsite handling methods CO2- U

9. What are the Types of Composting? CO1- R
10. List out the off-site processing techniques. CO2- U

PART – C (5 x 16= 80Marks)

11. (a) Can You list the salient features of Indian legislations on management and handling of municipal solid wastes? How could this legislation be help to support Solid Waste Management System? CO3-App (16)
- Or
- (b) What are the Functional elements in solid waste management? How are these elements interrelated? CO3-App (16)
12. (a) Classify the Sampling techniques in MSWM. CO4- Ana (16)
- Or
- (b) Identify the solid waste characteristics & Explain the various physical-chemical biological characteristics of MSW. CO4- Ana (16)
13. (a) Elaborate the Function of the Transfer station and factors you consider for the site selection of transfer station. CO4-Ana (16)
- Or
- (b) Explain the collection routes in detail. CO2-U (16)
14. (a) Explain Resource Recovery from solid wastes. CO2-U (16)
- Or
- (b) What is composting? Explain the working of different types of composting with neat sketches. CO2-U (16)
15. (a) What do you understand the term leachate? Illustrate the problems are posed by leachate and How would you overcome? CO5-C (16)
- Or
- (b) Explain the lifecycle of a landfill. CO2-U (16)