

CIVIL

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Question Paper Code : 80443

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2016.

Seventh Semester

Civil Engineering

EN 6501 — MUNICIPAL SOLID WASTE MANAGEMENT

(Common to Fifth Semester Environmental Engineering)

(Regulations 2013)

Time : Three hours

Maximum.: 100 marks

Answer ALL questions.

PART A — ($10 \times 2 = 20$ marks)

1. What is meant by solid waste Management?
2. Give the composition of Municipal solid waste.
3. What are the 4 – R's in waste hierarchy?
4. List the various advantages of waste segregation?
5. What are the factors considered in collection of solid waste?
6. Differentiate between Primary and Secondary collection.
7. What do you understand by the processing of waste?
8. Write the merits and demerits of Incineration.
9. List out the various methods of disposal of solid waste.
10. List the effects of improper disposal of solid waste.

PART B — ($5 \times 16 = 80$ marks)

11. (a) (i) Explain various types of solid waste in detail. (8)
(ii) Explain the Physical and chemical characteristics of MSW. (8)

Or

- (b) (i) Explain the factors influencing the solid waste generation rate. (8)
(ii) Explain the need of public awareness and role of NGOs in solid waste management. (8)
12. (a) (i) Explain briefly about the onsite storage methods. (8)
(ii) Describe the various methods of sorting the solid waste. (8)

Or

- (b) (i) What are the various onsite storage methods? Critically evaluate the best option under Indian conditions. (8)
(ii) Explain the measures to be taken by local bodies towards segregation of recyclable waste? (8)
13. (a) Define Transfer station. Explain the role and usefulness of transfer station. Also explain selection of site for Transfer Station. (16)

Or

- (b) Discuss in detail the present scenario in collection of MSW under Indian conditions. (16)
14. (a) Describe the incineration Technologies and air emissions and its Control in detail. (16)

Or

- (b) Write briefly about the composting facilities and various types of composting techniques.
15. (a) What is leachate? Mention the various methods of treatment of leachate and disposal. (16)

Or

- (b) Describe in detail the different methods of landfilling and the operations involved with neat Sketches. (16)