

Reg. No. :

Question Paper Code : 50620

B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2023.

Fifth/Seventh Semester

Civil Engineering

EN 8591 – MUNICIPAL SOLID WASTE MANAGEMENT

(Common to: Environmental Engineering)

(Regulations 2017)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is garbage?
2. Name two factors affecting solid waste generation rate.
3. What is meant by Construction / Demolition waste?
4. What are the advantages of recycling of plastics?
5. What is the purpose of a Transfer Station?
6. Write the disadvantages of Stationary container system for solid waste collection.
7. What is Vermi-composting?
8. What is the composition of biogas?
9. Mention two disadvantages of Open dumping of Municipal Solid Waste.
10. What is the purpose of a Landfill liner?

PART B — (5 × 13 = 65 marks)

Civil

11. (a) Explain the Public health and Environmental impacts of improper disposal of Solid Waste.
Or
(b) Explain sampling and characterization of Municipal Solid Waste.
12. (a) Explain Reduction, Reuse and Recycling principles of Solid Waste Management.
Or
(b) Describe Municipal Solid Waste segregation techniques, their merits and demerits.
13. (a) Explain the methods of Residential and Commercial wastes collection.
Or
(b) Distinguish between Stationary Container System and Hauled Container System of Solid Waste Collection.
14. (a) Explain the principle and process of Aerobic composting.
Or
(b) What is Incineration? What are the merits and demerits of Incineration? Explain with a neat sketch the process involved in an Incineration plant.
15. (a) What are the factors to be considered in the site selection for landfill site?
Or
(b) Explain the management of leachates and landfill gas in a Sanitary landfill.

PART C — (1 × 15 = 15 marks)

16. (a) Explain the design considerations for Sanitary landfill.
Or
(b) Explain the hierarchy of options for Solid Waste Management in India.