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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)

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.