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25226

3 Hours / 70 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
 - (2) Answer each next main Question on a new page.
 - (3) Illustrate your answers with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.
 - (5) Assume suitable data, if necessary.
 - (6) Use of Non-programmable Electronic Pocket Calculator is permissible.
 - (7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Attempt any FIVE of the following :

10

- (a) State any two characteristics of solid waste.
- (b) Define Industrial Waste.
- (c) State the methods storage of household waste.
- (d) Define Hazardous and Non-Hazardous Waste.
- (e) Define Biomedical waste.
- (f) List the various methods of composting.
- (g) State two advantages and two disadvantages of incineration process.



2. Attempt any THREE of the following :**12**

- (a) Explain the steps in process of Vermi-composting and state its suitability.
- (b) State the four factors affecting the site selection for land filling technique to dispose solid waste.
- (c) Write name of any four transport vehicles with their capacities used for transporting municipal solid waste.
- (d) Explain organization pattern of solid waste management.

3. Attempt any THREE of the following :**12**

- (a) Differentiate between Bangalore and Indore method of composting. (Any four).
- (b) Explain manual methods of collection of municipal solid waste.
- (c) Explain the factors affecting waste generation.
- (d) Explain the role of Central Pollution Control Board in management of solid waste.

4. Attempt any THREE of the following :**12**

- (a) Explain the role of Extended Producer Responsibility in waste management.
- (b) Explain impact of solid waste on environment.
- (c) Explain the need of Leachate treatment.
- (d) Discuss the origin and effects of the following E-Waste constituents on human health : Cadmium, Lead, Mercury, Plastic Compounds
- (e) What is Waste Segregation ? Explain its importance.

5. Attempt any TWO of the following : 12

- (a) Enlist the different types of incinerators and explain any one in detail with advantages and disadvantages.
- (b) Explain Transfer Station and its necessity.
- (c) Explain Methane capture from landfills and its benefits.

6. Attempt any TWO of the following : 12

- (a) Suggest suitable management techniques for various categories of Biomedical waste.
 - (b) Explain preparation of Refuse-Derived Fuel (RDF) and its advantages.
 - (c) Discuss all the factors affecting the composting process.
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