

22605

23242

3 Hours / 70 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
 - (2) Illustrate your answers with neat sketches wherever necessary.
 - (3) Figures to the right indicate full marks.
 - (4) Assume suitable data, if necessary.
 - (5) Preferably, write the answers in sequential order.

Marks

- 1. Attempt any FIVE of the following :** **10**
 - (a) State any two characteristics of solid waste.
 - (b) Write any two precautions to be taken during handling and processing of solid waste.
 - (c) List various transportation equipments in solid waste management system.
 - (d) State any two features of Biomedical Waste Management of Handling Rule, 1998.
 - (e) Define Industrial Waste.
 - (f) State any two salient features of Solid Waste Management Rule (SWM), 2016.
 - (g) State any two impacts of solid waste on environment.

- 2. Attempt any THREE of the following :** **12**
 - (a) Explain the four “R’s” of solid waste management hierarchy.
 - (b) Explain the meaning of transfer station, its necessity and location.
 - (c) State the factors affecting composting process.
 - (d) State and explain varieties of Industrial Solid Waste.



- 3. Attempt any THREE of the following : 12**
- (a) Describe the organisation pattern of Solid Waste Management.
 - (b) What is recycling of solid waste ? State the purpose of recycling.
 - (c) Explain the importance of public involvement in solid waste management.
 - (d) What is E-waste ? State the effects of E-waste constituents on human health.
- 4. Attempt any THREE of the following : 12**
- (a) What is Waste Segregation ? Explain its importance.
 - (b) Enlist the methods of land filling of solid waste. Explain any one method in brief.
 - (c) Define vermicomposting. Explain its concept in brief.
 - (d) Explain the health problem during the time of segregation, reuse, recovery and recycling of solid waste.
 - (e) State benefits of recycling of E-waste.
- 5. Attempt any TWO of the following : 12**
- (a) Describe any two methods of collection of waste from the following :
 - (i) Collection of bio-medical waste
 - (ii) Collection of waste from vegetable, fruits, meat and fish markets
 - (iii) Collection of construction and demolition waste.
 - (b) Classify biomedical waste treatment w.r.t. category, treatment and disposal.
 - (c) Describe the method of collection and disposal of industrial waste.
- 6. Attempt any TWO of the following : 12**
- (a) Explain with neat sketch about single composite linear system and double linear system for the leachate control.
 - (b) Define E-waste. State various types of E-wastes. Explain the methods of disposal of E-waste.
 - (c) State the role of CPCB and MPCB in Management of Solid Waste from various sources.
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