

University of Mumbai

Examinations Summer 2022

SEM VII CBCGS-R16 SOLID WASTE MANAGEMENT

Time: 2 hour 30 minutes

Max. Marks: 80

Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks
1.	Following is not the functional element of solid waste management.
Option A:	Processing
Option B:	Disposal
Option C:	Collection
Option D:	Coagulation
2.	The Anaerobic method of mechanical composting is called as
Option A:	Indore
Option B:	Bangalore
Option C:	Calcutta
Option D:	Bhopal
3.	----- and compaction are unit operations that are used to increase the density of recovered materials.
Option A:	Size reduction
Option B:	Material handling
Option C:	Size separation
Option D:	Densification
4.	Which of the material is used as sealant in landfill for gas and leachate control
Option A:	Lime
Option B:	Sand
Option C:	Bentonite
Option D:	Flyash
5.	The primary reason for using----- is to reduce the cost of transporting waste to disposal facilities.
Option A:	transfer station
Option B:	landfill
Option C:	Dumping sites
Option D:	Community bins
6.	Biomedical waste is not disposed of by -----
Option A:	Incineration
Option B:	Plasma Pyrolysis
Option C:	Encapsulation
Option D:	Composting
7.	Which one of the following is an example of e-waste?
Option A:	Nuclear wastes, medical wastes, toxic industrial wastes, etc.
Option B:	Sensors, alarms, sirens, TV etc.
Option C:	Plastic bags, cardboard boxes, corroded metals, etc.
Option D:	Beverage cans, packaged boxes, plastic bottles, etc..

8.	The characteristic of municipal solid waste is
Option A:	Hazardous
Option B:	Toxic
Option C:	non hazardous
Option D:	Reactive
9. means the collection of Solid Waste from a residential Customer's backyard/sideyard where necessary for safety, convenience, access, or where requested by the Customer.
Option A:	Alley System
Option B:	Backyard Service
Option C:	Set-out Service:
Option D:	Curb Service
10.	Which integrated waste management is reduced on an individual level?
Option A:	Burning
Option B:	Disposal
Option C:	Recycling
Option D:	Source reduction

Q2 (20 Marks)	
A	Solve any Two 5 marks each
i.	Write a note on vermicomposting
ii.	Explain management of E-waste in India
iii.	What is Refused Derived fuel and explain its manufacturing and applications.
B	Solve any One 10 marks each
i.	Explain steps in generation of carbon monoxide from anaerobic composting. Write all equations.
ii.	Explain various container system for solid waste management.

Q3 (20 Marks)	
A	Solve any Two 5 marks each
i.	Explain material recovery facility and its role in solid waste management.
ii.	Explain integrated waste management
iii.	Write characteristics of hazardous waste and how it has to be treated?
B	Solve any One 10 marks each
i.	How is density and moisture content measured in solid waste and its role in disposal?
ii.	Explain with neat sketch any two collection systems in solid waste management

Q4. (20 Marks)	
A	Solve any Two 5 marks each
i.	Write a note on chemical conversion technology of solid waste.
ii.	Write a note on leachate generation, treatment and its significance to environment.
iii.	Explain Heuristic guidelines and optimization of route in transporting solid waste.
B	Solve any One 10 marks each
i.	Explain various aspects of biomedical waste. Write in details category and color coding used for biomedical waste management.
ii.	Explain with neat diagram sanitary landfill , its components and functions.