

In-Class Exercise

1. A stone works company employs 6 people. If the density of their uncompacted waste is 480 kg/m³, determine the annual volume of solid waste by the company assuming a waste generation of 1 kg/cap.day.

2. Professor Green has made measurements of her household as shown below. Her trash container has a volume of 0.0757 m³ and a mass of 3.63 kg. What is the average density of her household waste?

Date	Gross Mass kg			
1	7.26			
2	7.72			
3	10.89			
4	7.26			
5	8.17			
6	6.35			
7	8.17			
8	8.62			

Multiple Choice:

- Which of the following can be used in composting?
 - Batteries such as those used in flashlights and radios
 - Meat and other food waste
 - Metals such as lead and mercury
 - Both A and C
- Which items make up the largest percentage of waste produced by households and businesses in the USA?
 - Aluminum cans
 - Plastic bottles and packaging
 - Yard waste, such as grass clippings and tree limbs
 - Paper products
- From 1970 to the present, the percentage of waste that is recycled in the USA has:
 - Remained unchanged
 - Increased
 - Decreased
 - None of the above
- An example of something that is non-biodegradable is:
 - Rotten eggs and cabbage
 - A leaf in a compost pile.
 - A polystyrene burger container in a trash can.
 - All of the above

5. The major costs in Solid Waste Management incur from:
 - A) Recycling of the Waste
 - B) Collection of the Waste
 - C) Composting of the Waste
 - D) None of the above

6. A transfer station is a place where:
 - A) Trash haulers rest
 - B) Recycled waste components are transferred
 - C) Trucks dump their loads into a larger vehicle where it is compacted
 - D) None of the above

7. The quickest and most economical collection of solid waste is:
 - A) Alley pickup
 - B) Backyard pickup
 - C) Curbside pickup
 - D) None of the above

8. The two methods that are used to operate a landfill are:
 - A) Open area and trench methods
 - B) Open area and cover methods
 - C) Trench and cover methods
 - D) None of the above

9. Two products that are generated and need to be managed in a landfill are:
 - A) Solid and hazardous waste
 - B) Leachate and landfill gases
 - C) Bacteria and rodents
 - D) None of the above

10. The two most common landfill gases are:
 - A) Oxygen and nitrogen
 - B) Oxygen and carbon dioxide
 - C) Carbon dioxide and methane
 - D) None of the above

11. Landfill gases are generated due to:
 - A) Burning of the waste
 - B) Chemical precipitation of the waste
 - C) Microbial degradation of the waste
 - D) None of the above

12. Landfills by law are required to have a:
 - A) Sand layer at the bottom to protect groundwater
 - B) Sand layer topped by a geosynthetic liner to protect groundwater
 - C) Clay liner topped by a geosynthetic liner to protect groundwater
 - D) None of the above

13. A landfill that is supplied with air and water is called:
 - A) An incinerator
 - B) A refuse derive fuel facility
 - C) A bioreactor landfill
 - D) None of the above

14. Leachate collection systems are designed to collect produced waste from what facility?
 - A) An incinerator
 - B) A refuse derive fuel facility
 - C) A bioreactor landfill
 - D) None of the above