

20th Century Waste Management Innovations

Waste Management · Answer Key · 8 Questions

1. What groundbreaking technology, first developed in the early 20th century, revolutionized the disposal of organic waste by breaking it down through microbial action?

- A) Incineration with heat recovery
- B) Anaerobic digestion**
- C) Pyrolysis
- D) Plasma gasification

2. The concept of 'sanitary landfill,' designed to minimize environmental impact, saw significant development and widespread adoption in the 20th century. Which decade is considered the most crucial for its formalization and implementation?

- A) 1910s-1920s
- B) 1930s-1940s
- C) 1950s-1960s**
- D) 1970s-1980s

3. Which major environmental disaster in the mid-20th century directly led to increased public awareness and regulatory action concerning industrial waste disposal, particularly chemical waste?

- A) The Great Smog of London (1952)
- B) The Love Canal disaster (1978)**
- C) The Bhopal disaster (1984)
- D) The Exxon Valdez oil spill (1989)

4. The development of early forms of industrial-scale composting as a waste management solution gained traction in the 20th century. What was a primary driver for this innovation?

- A) Reducing landfill volume**
- B) Producing fertilizer for urban agriculture
- C) Mitigating methane emissions
- D) Creating biogas for energy

5. The first widespread use of plastic packaging in the mid-20th century presented new waste management challenges. Which material, a precursor to many modern plastics, saw its mass production begin in the 1900s and significantly impact waste streams?

- A) Polyvinyl chloride (PVC)
- B) Polyethylene terephthalate (PET)
- C) Bakelite**
- D) Nylon

6. What early 20th-century invention significantly reduced the volume of household solid waste and improved hygiene by allowing for more efficient compaction at the source?

- A) The first automated recycling sorters
- B) The electric garbage disposal unit**
- C) The multi-stream recycling bin
- D) The conveyor belt system for waste collection

7. The concept of 'Resource Recovery' began to emerge in the late 20th century. What was one of the earliest large-scale applications of this principle, focusing on extracting valuable materials from mixed waste?

- A) Automated optical sorting for plastics
- B) Magnet separation for ferrous metals**
- C) Air classification for light fractions
- D) Ballistic separation for aggregates

8. The development of specific regulatory frameworks for managing hazardous waste gained momentum in the latter half of the 20th century. The United States' 'Resource Conservation and Recovery Act' (RCRA) was enacted in which decade, marking a significant turning point?

- A) 1960s
- B) 1970s**
- C) 1980s
- D) 1990s