FAQ's

What are the types of solid waste generated?

a. Municipal Solid Waste (MSW):

The term municipal solid waste (MSW) is generally used to describe most of the non-hazardous solid waste from a city, town or village that requires routine collection and transport to a processing or disposal site, Sources of MSW include private homes, commercial establishments and institutions, as well as industrial facilities.

However, MSW does not include wastes from industrial processes, construction and demolition debris, sewage sludge, mining waste or agricultural wastes. MSW is also called as trash or garbage. In general, domestic waste and MSW are used as synonym

b. Hazardous Wastes:

Hazardous wastes are those that can cause harm to human and the environment.

Characteristics of Hazardous Wastes:

Wastes are classified as hazardous if they exhibit any of four primary characterises based on physical or chemical properties of toxicity, reactivity ignitability and corrosively.

1. Toxic wastes:

Toxic wastes are those that are poisonous in small or trace amounts. Some may have acute or immediate effect on human or animals. Carcinogenic or mutagenic causing biological changes in the children of exposed people and animals. Examples: pesticides, heavy metals.

2. Reactive wastes:

Reactive wastes are those that have a tendency to react vigorously with air or water are unstable to shock or heat, generate toxic gases or explode during routine management. Examples: Gun powder, nitro glycerin.

3. Ignitable waste:

Are those that burn at relatively low temperatures (< 60 °C) and are capable of spontaneous combustion during storage transport or disposal. Examples: Gasoline, paint thinners and alcohol.

4. Corrosive wastes:

Are those that destroy materials and living tissues by chemical reactions? Examples: acids and base.

5. Infectious wastes:

Included human tissue from surgery, used bandages and hypoderm needles hospital wastes.

c. Industrial Wastes:

These contain more of toxic and require special treatment.

Source of Industrial Wastes:

Food processing industries, metallurgical chemical and pharmaceutical unit's breweries, sugar mills, paper and pulp industries, fertilizer and pesticide industries are major ones which discharge toxic wastes. During processing, scrap materials, tailings, acids etc.

d. Agricultural Wastes:

Sources of Agricultural Wastes:

The waste generated by agriculture includes waste from crops and live stock. In developing countries, this waste does not pose a serious problem as most of it is used e.g.,

dung is used for manure, straw is used as fodder. Some agro-based industries produce waste e.g., rice milling, production of tea, tobacco etc. Agricultural wastes are rice husk, degasses, ground nut shell, maize cobs, straw of cereals etc.

e. Bio-Medical Wastes:

Bio-medical waste means any waste, which is generated during the diagnosis, treatment or immunisation of human beings or animals or in research activities pertaining thereto or in the production or testing of biological.

Discuss the advantages and disadvantage of using landfill as a method of disposal of waste.

Landfills are site for waste disposal by the method of burying which is one of the oldest from of waste management. Landfills are the most common methods of waste disposal and are the same in most of the place around the world. Landfills are also used for waste management purposes like for temporary storage, consolidation, transfer and processing of waste material.

Landfills are engineered waste disposal systems that have large rubbish tips or dumps. The modern landfills are made to prevent the loss of leachate and gases to the surrounding environment. A landfill may also be the ground at are filled with rocks instead of waste materials so that is can be used for a purpose like for construction.

In order to meet certain specifications in non-hazardous waste landfills the techniques that are applied by which wastes are restricted to small area, the wastes are compressed to reduce their volume and they are covered with soil daily.

In the landfill operations the vehicles which collect wastes are weighed and their load is screened for wastes that do not fulfill the criteria of the landfills. After deposition of

the waste bulldozers or compactors spread and compress the waste on the working face. This compacted waste is covered with soil or any other alternative material every day. The alternative material that is used to cover the compressed waste is chipped wood or other green waste. The space that is filled with the compacted waste and the cover material is known as daily cell. The compression of waste to make it compact is important to extend the life of the landfill.

Advantages of landfills:

- There are many advantages of landfills. The main advantage is that burying can produce energy and can be obtained by the conversion of landfill gas.
- The waste products of landfills can be used as direct fuel for combustion or indirectly they can be processed into another fuel.
- Landfill is a specific location for waste deposition that can be monitored.
- On completion of the landfill it can be reclaimed and it can be used as parks or farming land.
- In properly designed landfills the waste can be processed and all recyclable materials can be used before closing.
- Organic material can also be separated from a properly designed landfill which can be used for compost or production of natural gas.
- The landfills that are properly managed can capture the natural gas or methane that is produced by the underground decomposing material.

Disadvantages of landfills:

- Landfills that are poorly designed or operated share more problems that are faced at the uncontrolled dumping areas.
- The areas surrounding the landfills become heavily polluted.
- Landfill can pollute air, water and also the soil.

- In a poorly developed landfill it is difficult to keep the dangerous chemicals from leaching out into the surrounding area.
- Dangerous chemicals can seep into the ground water system.
- Many insects and rodents are attracted to landfills and can result in dangerous diseases.
- It can cause diseases and illness in the communities living around the landfill.

What is composting?

Composting is nature's process of recycling decomposed organic materials into a rich soil known as compost. Anything that was once living will decompose. Basically, backyard composting is an acceleration of the same process nature uses. By composting your organic waste you are returning nutrients back into the soil in order for the cycle of life to continue. Finished compost looks like soil–dark brown, crumbly and smells like a forest floor.

Types of composting:

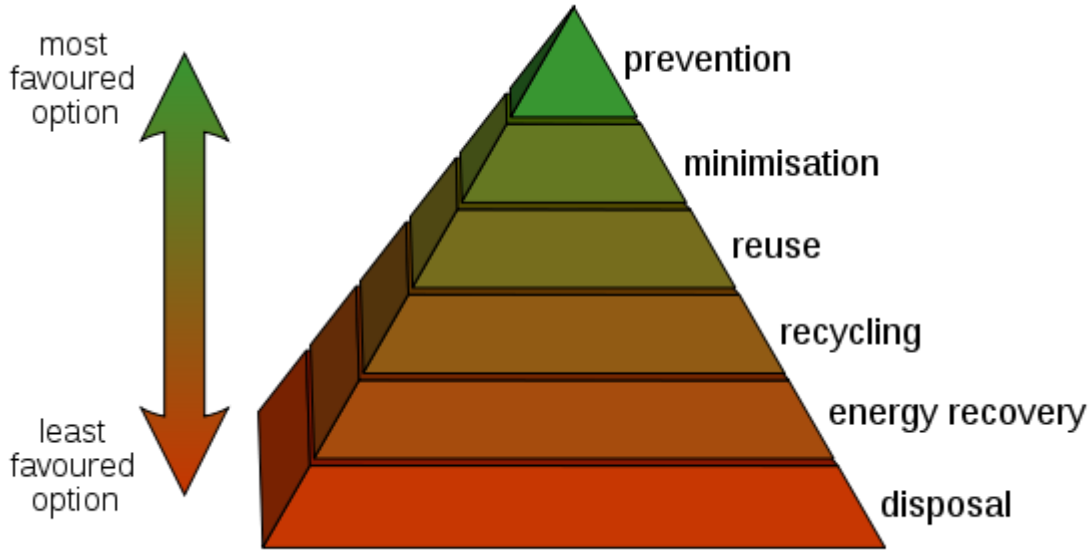
- Backyard composting — If you have a yard and a balance of browns (fallen leaves or straw) and greens (grass clippings and food scraps), you have all you need to make compost.
- Worm composting (vermicomposting) — If you have a tiny yard or live in an apartment or have an abundance of food scraps, this type of composting is for you.
- Grasscycling If you have grass clippings and don't want to use them in a compost pile you can leave them on the lawn to decompose. Read about grasscycling for tips, techniques and benefits.

Discuss the hierarchy of solid waste disposal.

The evaluation of processes that protect the environment alongside resource and energy consumption to most favourable to least favourable actions. The hierarchy establishes preferred program priorities based on sustainability. To be sustainable, waste management cannot be solved only with technical end-of-pipe solutions and an integrated approach is necessary.

The waste management hierarchy indicates an order of preference for action to reduce and manage waste, and is usually presented diagrammatically in the form of a pyramid. The hierarchy captures the progression of a material or product through successive stages of waste management, and represents the latter part of the life-cycle for each product.

The aim of the waste hierarchy is to extract the maximum practical benefits from products and to generate the minimum amount of waste. The proper application of the waste hierarchy can have several benefits. It can help prevent emissions of greenhouse gases, reduces pollutants, save energy, conserves resources, create jobs and stimulate the development of green technologies.



All products and services have environmental impacts, from the extraction of raw materials for production to manufacture, distribution, use and disposal. Following the waste hierarchy will generally lead to the most resource-efficient and environmentally sound choice but in some cases refining decisions within the hierarchy or departing from it can lead to better environmental outcomes.