Section - 4 :-

* Composting :-

→ Composting is a natural process that turns organic material into a dark rich substance.

→ This substance, called "compost" or humus, is a wonderful conditioner for your soil.

→ The organic matter in compost helps soil hold onto nutrients and water, benefiting your plants while reducing the risk of pollution.

→ The decomposition process is aided by shredding the plant matter, adding water and ensuring proper aeration by regularly turning the mix, like when open piles or "windrows" are used.

→ Fungi, earthworms, and other beneficial bacteria also help break down organic material.

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Thermal conversion Technologies -

→ one conversion Technology category is thermal conversion, using heat, with or without oxygen, to turn biomass into energy like liquid fuels and chemical feedstocks.

→ Included are pyrolysis, gasification and combustion.

→ This method is tend to produce fewer emission while converting trash into usable energy.

And
→ The Thermal processing of solid waste used both for volume reduction and energy recovery is important element of IWMS

→ the Recovery of energy -
1) Through composting and bio fagfication
2) Thermal Treatment of solid waste
which is called as pre-Treatment of waste prior to final disposal.

* Fundamental of Thermal processing -

→ Thermal processing is the conversion of solid waste into gaseous, liquid and solid combustion products with the concurrent or subsequent release of heat energy.

→ Thermal processing system can be categorized on the basis of their energy requirements.

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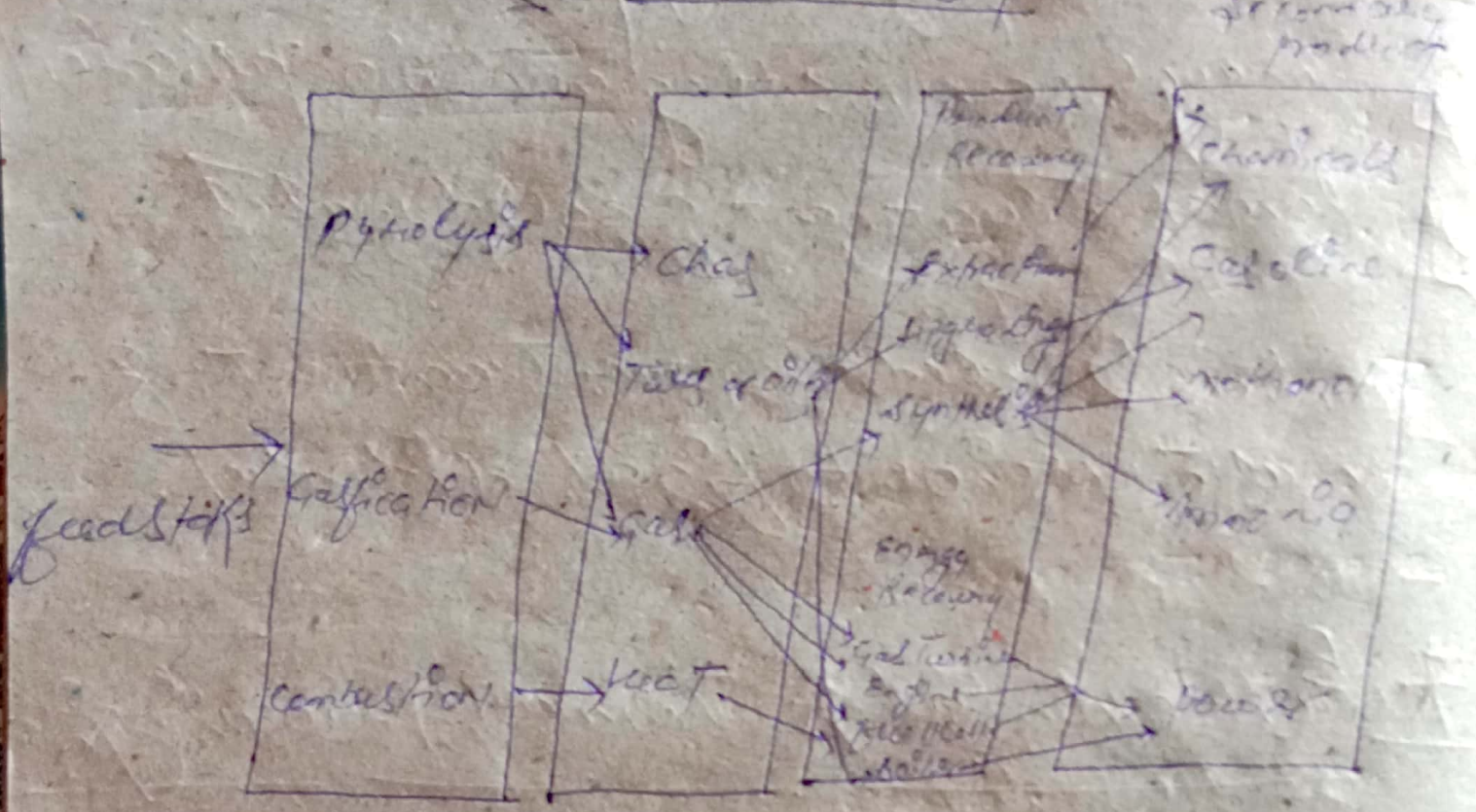
Thermal conversion Technology :-



Excess air combustion :-

→ Combustion can be defined as the thermal processing of fuel by chemical oxidation with stoichiometric or excess amount of air.

→ Excess air has to be used primarily mixing and Turbulence, that ensuring that air can reach all parts of the waste.