**For 6 Sem** (Paper 6.1 Year 2018) Prepared by – Mala Moni Kalita

**How waste management can limit damage done to environment and conserve scarce resources?**

Waste management (or waste disposal) include the activities and actions required to manage waste from its inception to its final disposal. This includes the collection, transport, treatment and disposal of waste, together with monitoring and regulation of the waste management process.

Waste can be solid, liquid, or gas and each type have different methods of disposal and management. Waste management deals with all types of waste, including industrial, biological and household. In some cases, waste can pose a threat to human health. Waste is produced by human activity, for example, the extraction and processing of raw materials. Waste management is intended to reduce adverse effects of waste on human health, the environment or aesthetics.

Waste management practices are not uniform among countries (developed and developing nations); regions (urban and rural areas), and residential and industrial sectors can all take different approaches.

A large portion of waste management practices deal with municipal solid waste (MSW) which is the bulk of the waste that is created by household, industrial, and commercial activity.

Waste Management is committed to protecting human health and the environment. This commitment is a cornerstone of all that we do, reflected in the services we provide to customers, the design and operation of our facilities, the conditions under which employees work, and our interactions with the communities where we live and do business. We are responsible stewards of the environment and protect the health and wellbeing of our employees and neighbours. The following principals are applicable to company operations worldwide:

Protection: We will conduct all operations in a manner that protects the environment and our employees, neighbours, and customers. We will proactively work to implement procedures and programs to prevent pollution.

Compliance: We will comply with all legal requirements, and will proactively implement programs and procedures to ensure compliance.

Conservation: We will practice and promote the conservation of nature and the earth’s energy resources.

The following are some types of waste management practices which can limit damage done to environment—

• waste avoidance - Preventing the generation of waste or reducing the amount of waste generated.• waste re-use - Re-using waste, without first substantially changing its form.

• waste recycling - Treating waste that is no longer useable in its present form and using it to produce new products.• energy recovery from waste - Recovering and using energy generated from waste.

• waste disposal - Disposing of waste, or treating and disposing of waste, in a way that causes the least harm to the environment.

Examples of treatment before disposal—

• employing a bio-treatment to degrade material into a compound or mixture

• employing a physical-chemical treatment (for example, evaporation, drying, calcination, catalytic processing, neutralisation, precipitation or encapsulation) to obtain a compound or mixture

• blending or mixing waste to obtain a compound or mixture

• storing or repackaging waste

• employing thermal processes, with or without catalysts, to convert waste into a non-hazardous material

Examples of disposal—

• disposal to a landfill

• destroying thermally without recovering heat or another secondary

Using the above waste management methods the damage done to environment can be minimized as well as conserve scarce resources.