

M.Sc. IV Semester

Unit III

Lecture I

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Bioremediation

Bioremediation is a branch of biotechnology that employs the use of living organisms, like microbes and bacteria, in the removal of contaminants, pollutants, and toxins from soil, water, and other environments.

Bioremediation may be done

"in situ"—at the site of the contamination—

or

"ex situ"—away from the site.

Types of Bioremediation

1) Biostimulation

2) Bioaugmentation

3) Intrinsic Bioremediation

Other methods of Waste Management

Incineration

This is a process where wastes and other unwanted substances are burnt. During combustion, the organic waste turns into ash, flue gas, and heat. The inorganic constituents of the waste remain in the form of an ash. It is also termed as thermal treatment.

Phytoremediation

Plants are directly used to clean up or contain contaminants in the soil. This method of bioremediation will help mitigate the environmental problem without the need to excavate the contaminant material and dispose of it elsewhere.

Continued

Lecture II