

SECOND TERM SS 2 BIOLOGY WEEK FIVE (5)

6TH-10TH FEBRUARY, 2023

CONTENT

Definition of Pollution

Air Pollution

Noise Pollution

Land Pollution

Water Pollution

POLLUTION

Definition: Pollution is defined as the release of toxic or harmful substances into the environment by their natural forces or man and other animals to an extent that causes biological damage to man and his resources. In other words, pollution is the release of harmful substances into the environment, i.e., water, air and land in quantities or to the level that is harmful to man, animals and plants.

The harmful substances that cause pollution in the environment are called pollutants.

There are four main types of pollution. These are

(a) Air pollution

(b) Noise pollution

(c) Land pollution

(d) Water pollution

Air Pollution

Control of Air Pollution

- Conditions must be created for complete combustion of fuel in internal combustion engines.
- Chemical waste should be discharged into the air through fumes chambers.
- Industries should be sited far away from residential areas.
- There should be a provision of filters or absorbers to be worn around mining and industrial areas so as to reduce pollution from waste gases.
- Legislation should be made against indiscriminate burning that may bring about smoke.

Noise pollution

- Noise Sources include
- Factory or industrial noise.
- Aeroplane or aviation noise.
- Railway engine noise.
- Car horns and sirens.
- High pitched musical sound from loudspeakers.

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- Noise from heavy guns or cannon shots.
- Thunder noise.
- Noise from generators.

Effects of Noise Pollution

- It causes loss of hearing or deafness.
- Noise can cause emotional disorder, anxiety or lack of concentration.
- Noise can also cause high blood pressure or hypertension.
- It causes general irritation or short tempers.
- It can also cause changes in behaviour.

Control of Noise

- There should be a reduction in noise from loudspeakers and sirens.
- Legislation should be made against the use of loudspeakers in public places
- Installation of soundproof in industries.
- Heavy guns must be banned.
- Railways and airports should be sited far away from residential areas.

Land Pollution

Control of Land Pollution

- Refuse should be burnt in incinerators.
- Urban wastes should be properly burnt or buried
- Metal scraps, tin cans, bottles, motor vehicle parts and other related materials should be recycled.
- Pesticides and fertilizers should be applied as instructed.
- Legislation should be made against dumping of harmful wastes.
- Proper treatment of sewage before disposal.
- Proper maintenance and checking of oil pipelines.

Water Pollution

Control of Water Pollution

- (i) There should be efficient and proper sewage disposal system.
- (ii) Dumping of refuse or petro-chemical byproducts into rivers, streams or seas should be avoided.
- (iii) There should be efficient techniques to deal with or prevent oil spillage.
- (iv) Industries should be sited far away from residential areas.

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(v) Government or local authorities should strictly monitor all industrial wastes.

(vi) There should be public enlightenment on waste disposal.

(vii) Industrial effluents should be recycled.

Methods of Purifying Water

Methods involved in purifying water include: (i) Boiling (ii) Addition of chemicals, e.g. alum or chlorine (iii) Filtration (iv) Distillation (v) Sterilization using UV light

(vi) Boiling (vii) Sedimentation

General Evaluation

1. Define the term pollution.
2. State four types of pollution.
3. Mention three air and noise pollution.
4. State three effects of air, water and land pollution.
5. What is sewage?