

Question 1:

Why are some substances biodegradable and some non-biodegradable?

Answer 1:

Some substances which are degraded and broken down into simpler substances by the microorganisms, are called biodegradable substances.

For example: Cotton, wood, paper, wool, etc.

Substance (mainly man-made) that do not degraded or broken down into simpler substances by the action of enzymes secreted by microorganisms are called non-biodegradable substances.

For example: Plastic, polythene, DDT, etc.

Question 2:

Give any two ways in which biodegradable substances would affect the environment.

Answer 2:

- During decomposition process of biodegradable substances foul smell and some harmful gases are released which make problem for the nearby living person.
- During decomposition it provide a breeding ground for mosquitoes, insects and microbes responsible for diseases like cholera, diarrhoea, etc.

Question 3:

Give any two ways in which non-biodegradable substances would affect the environment.

Answer 3:

- Chemicals like BHC and DDT induce carcinoma (muscle cancer) and growth of tumours.
- Handling of waste materials may cause skin, respiratory and intestinal infections.
- Non-biodegradable substances do not decompose easily so it produces land and water pollution.

Question 1:

What are trophic levels? Give an example of a food chain and state the different trophic levels in it.

Answer 1:

The various steps in food chain at which transfer of food energy takes place are called trophic levels.

Example: Food chain operating in a grassland.

Grass → Insects → Frogs → Snakes

1. Grass → 1st trophic level
2. Insects → 2nd trophic level
3. Frogs → 3rd trophic level
4. Birds → 4th trophic level

Question 2:

What is the role of decomposers in the ecosystem?

Answer 2:

Decomposers are microorganisms that act on dead and decaying bodies of producers and consumers and break them into simple inorganic compounds. They absorb some of the substances and release the rest into the environment to be recycled and to be used in future by producers. Thus, decomposers have a key role in the cycling of material in the biosphere and provide the raw materials to the producers. So in this way they make the soil fertile.

Question 1:

What is ozone and how does it affect any ecosystem?

Answer 1:

Ozone (O_3) is a molecule formed by three atoms of oxygen. Ozone, is a deadly poison. However, at the higher levels of the atmosphere, ozone performs an essential function. It shields the surface of the earth from ultraviolet (UV) radiation from the Sun.

This radiation is highly damaging to organisms, for example, it is known to cause skin cancer, cataract and damage the immune system in human beings. It also destroys plants and reduces photosynthesis process.

Question 2:

How can you help in reducing the problem of waste disposal? Give any two methods.

Answer 2:

- By minimising the use of disposal items and promoting the use of recycled articles.
- Separating biodegradable and non-biodegradable waste before dumping them.
- Recycling the non-biodegradable waste material.