

Conservation of Environment

Exercise 69:

Solution 1(a):

1. Mountain	8. Crane
2. Trees	9. Buffalo
3. House	10. Cows
4. Temple	11. Monkey
5. River	12. Dogs
6. Elephant	13. Flower
7. Human beings	14. Fish

Exercise 70:

Solution 1(a):

There are various organisms like elephant, crane, fish, crocodile, monkey, buffalo and cows.

Solution 1(b):

Mountains, homes and temple are the non-living things in that picture.

Solution 1(c):

If we don't get air, we will not survive as oxygen is the main component of air that is required to breathe.

Exercise 71:

Solution 1(a):

If we get impure air in our breathing, we will not be able to breathe properly and improper oxygen consumption will thus, ultimately lead to fatigue and heightened anxiety state.

Solution 1(b):

The harmful pollutants which are released from vehicles, factories, etc. go into the atmosphere and pollute the air. It also causes acid rain which is harmful for crops, monuments etc.

Exercise 72:

Solution 1(a):

1. We can use public forms of transport.
2. We can use unleaded petrol in vehicles.
3. We should not burn leaves and garbage; rather we can put it in a compost pit.
4. We can use energy efficient light bulbs and appliances.

Solution 1(b):

Plants are the only life forms on Earth which are capable of producing fixed carbon and oxygen from carbon dioxide and water using sunlight via the process of photosynthesis. Without plants, herbivores would die; without herbivores, carnivores and omnivores would die. If there were no plants on earth, we would all be dead because plants give oxygen. So, there would be no life.

Exercise 73:

Solution 1(a):

Plants help us in different ways. They are as follows –

1. Provide us with vegetables, fruits.
2. Provide green cover to the earth.
3. Gives us shade.
4. Help in bringing rain.
5. Provide plenty of oxygen.
6. Give medicinal herbs.

Solution 1(b):

1. Reducing the consumption of products made from trees (e.g. paper)
2. Providing alternate fuel to rural poor for cooking (e.g. bio gas) so as to reduce cutting of trees for fuel wood
3. Avoiding disposal of plastic products so as to allow rain water to percolate into ground and prevent erosion of soil to save the root system of trees
4. Avoiding any human activity that may cause forest fires
5. Creating awareness among people about the importance of trees and the need for their conservation.

Exercise 74:

Solution 1(a):

Plants need water to survive. They also provide most life forms with oxygen to breathe. Without water, there would be no life on earth and the survival of living beings, trees,

animals, humans, birds will not be possible. Without plants, most animals and humans would die as soon as all the oxygen in the air will be gone.

Solution 1(b):

1. We can use waste water(from cooking/bathing) for watering plants
2. We should close the sink/tap from running water.
3. We can use reusable water bottles.
4. We should take care of the usage of water during bathing and while cleaning vehicles.

Exercise 75:

Solution 1(a):

1. Washing cattle in water.
2. Addition of soap water during bathing.
3. Washing utensils.

Solution 1(b):

1. Industries release toxic chemicals in the river that cause water pollution.
2. The sewage and waste water that is produced by household is released into sea water.
3. Accidental oil leakage from the tankers and ships in the ocean cause damage to the aquatic environment.
4. Chemical fertilizers and pesticides when applied to plants mix up with water causing water pollution.

Solution 1(c):

The polluted water is very toxic and may contain harmful bacteria and microorganisms. We can fall sick frequently, if we drink dirty water.

Exercise 76:

Solution 1(a):

1. Excess use of insecticides and chemical fertilizers should be avoided.
2. We should check water quantity during washing utensils.
3. We can throw the garbage in a compost pit rather than throwing it in the kitchen sink.
4. There should be laws for protection and conservation of water.

Solution 1(b):

1. Plant growth is a primary use of soil.
2. It is a primary component of construction industry such as foundation for homes and buildings.
3. Soil also helps in making sandpaper.

Exercise 77:

Solution 1(a):

Useful things –

1. Proper grazing techniques and crop rotation.
2. Use of organic fertilizers such as manure and compost.
3. Proper irrigation techniques.

Harmful things-

1. Over-grazing of cattle.
2. Deforestation.
3. Excessive use of chemicals and fertilizers.

Solution 1(b):

1. Reduction in soil fertility.
2. Loss of the natural nutrients of the soil.
3. Pollutants in soil cause alteration in soil structure, causing death of many soil organisms.
4. Leakages from sanitary sewage.
5. Fuel leakages from automobiles that get washed away due to rain and seep into the nearby soil.

Solution 1(c):

1. Limited use of fertilizers and pesticides.
2. Grazing must be controlled and forest management should be done properly.
3. The industrial wastes must be dumped in low lying areas.
4. Planting more trees (reforestation) helps prevent soil pollution.

Exercise 78:

Solution 1(a):

The sources of energy are solar energy, geothermal energy, hydroelectric power and fossil fuels.

Solution 1(b):

The above picture indicates the presence of herbivores, carnivores and the primary source of energy which is the sun. This flow of energy occurs in a pattern called the food chain. In the food chain, herbivores eat producers, carnivores eat herbivores, and decomposers break down the remains. At each step, organisms use energy and lose most of their energy to the environment.

In this picture, the plants use sunlight for food production which passes on to herbivores which are eaten by them. The herbivores give energy giving foods like milk, eggs.

Exercise 79:

Solution 1(a):

90% of the energy is used by the organism and only 10% is transferred to the next level (successive organism).

Exercise 80:

Solution 1(a):

1. When herbivores eat green plants, they are taking energy into their bodies.
2. The herbivore will use this energy for movement and other body activities, such as reproduction and movement. Some parts of the plant which was eaten cannot be digested by the herbivore; the energy in these parts of the plant passes out of the herbivore's body as waste.
3. Some of the energy, however, is used for growth and remains as organic matter in the herbivore's body. It is this energy which can be eaten by the secondary consumer.
4. Only about 10% of the energy which the plant used for growth is taken into the body of the carnivore. The second consumer uses some of this energy for its own bodily activities and some of the energy will be wasted.
5. Therefore, the amount of energy available for the tertiary consumer is only 1% of the energy which the primary consumer gained from the plant.

Solution 1(b):

1. Using more energy efficiency equipments.

2. Switching off electrical equipments when not in use.
3. We can control usage of water.
4. Use of reusable or disposable materials such as cups, plates etc.

Solution 1:

Air- It is an essential component of living organisms as it is composed of oxygen, carbon dioxide and other useful gases. The oxygen is used by human beings for respiration and also used by plants.

Water- Plants need water to survive. They also provide most life forms with oxygen to breathe. Water is also needed for human beings in order to survive and continue the metabolism of the body.

Soil- To grow plants, soil is essential. Soil is also needed for construction purposes and is also helpful in disposing waste.

Energy- Without energy, life is impossible. All the above components are the sources of energy which is useful for survival of the organism.

Solution 2:

Trees are our best friends. We can best describe them like this:

1. They purify air.
2. They control air-pollution.
3. It is very important for agriculture.
4. They prevent soil-erosion.
5. Each part of the tree i.e. roots, stems, leaves, flowers, fruits are used in our food.
6. Trees give us drugs. They keep us healthy. Besides, they give us gum, rubber, oil etc. These materials are very useful to us.
7. They give us not only fire-wood but also timber. We use fire-wood as fuel.
8. They give shade and shelter to animals, birds and insects.
9. To acknowledge their contributions we celebrate Van Mahotsav.
10. Dry leaves are used to make compost. We add it to soil so that plants grow well.

Solution 3:

1. For conservation of natural resources like natural gas, one can get a tank-less water heater as it reduces the usage of natural gas.
2. Using public transportation.
3. We can create awareness among the people about the usage of natural sources.
4. We can recycle and reuse plastic.
5. We should protect our wildlife by keeping them in zoos and sanctuaries.

Solution 4:

1. Introduction of a foreign species into the native area causing them to be extinct which is also a type of pollution.
2. Emissions from industries and vehicles and use of pesticides in agricultural field cause air, water and soil pollution.
3. Use of household appliances and farm chemicals lead to air, water and soil pollution.