Ecosystems

EXERCISE [PAGE 128]

Exercise | Q 1.1 | Page 128

Complete the following by using correct option.

Air, water, minerals, soil are _____ factors of an ecosystem.

1. **physical**
2. organic
3. inorganic

Solution: Air, water, minerals, soil are **physical** factors of an ecosystem.

Exercise | Q 1.2 | Page 128

Complete the following by using correct option.

River, ponds, ocean are _____ ecosystem.

1. land
2. **aquatic**
3. synthetic

Solution: River, ponds, ocean are **aquatic** ecosystem.

Exercise | Q 1.3 | Page 128

Complete the following by using correct option

Man is _____ in an ecosystem.

1. producer
2. **consumer**
3. decomposer

Solution: Man is **consumer** in an ecosystem.

Exercise | Q 2 | Page 128

Match the following

Producers	Ecosystem
a. Cactus	1. Forest
b. Aquatic plants	2. Creek
c. Mangroves	3. Aquatic

d. Pine	4. Desert

Solution:

Producers	Ecosystem
a. Cactus	4. Desert
b. Aquatic plants	3. Aquatic
c. Mangroves	2. Creek
d. Pine	1. Forest

Exercise | Q 3.1 | Page 128

Give my information

Ecosystem

Solution: The interaction between the biotic and abiotic components present in a particular area is called an ecosystem. The abiotic components include sunlight, water, soil, air, etc., and the biotic components include the different plants and animals found in an area, e.g., lake, forest, grassland, lions, deer, etc.

Exercise | Q 3.2 | Page 128

Give my information

Biome

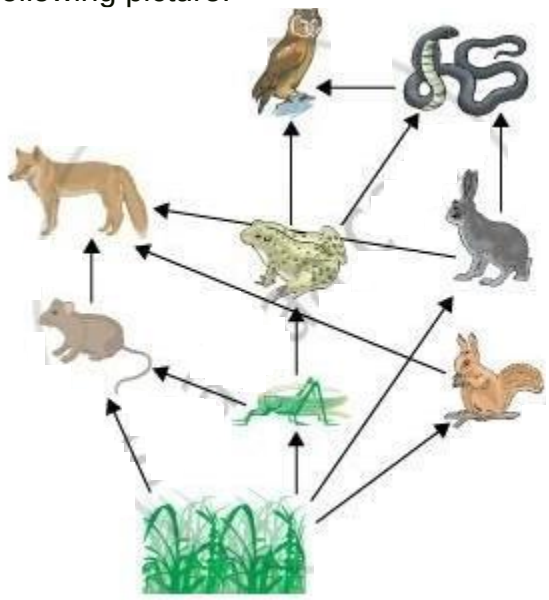
Solution: A biome is a very large ecosystem that comprise of a wide variety of vegetation and animal life. The identification of biomes is done on the basis of the vegetation cover constituting them. Biomes are classified into terrestrial biomes, freshwater biomes and marine biomes. Steppe grasslands in Central Asia and Pampas in South America are examples of biomes.

Exercise | Q 3.3 | Page 128

Give my information

Food web

Solution: Food web is the network of many food chains, like the one given in the following picture.



Exercise | Q 4.1 | Page 128

Give scientific reasons

Plants in an ecosystem are called producer.

Solution: Plants in an ecosystem are called producers because they synthesise their own food by the process of photosynthesis. All the other living organisms are dependant on plants for full filling their nutritional requirements and hence are called producer.

Exercise | Q 4.2 | Page 128

Give scientific reasons

Large dams destroy ecosystem.

Solution: Large dams destroy the ecosystem because the construction of dams across river leads to mass deforestation, which results in the loss of biodiversity. It leads to the widescale loss of flora and fauna of that area.

Exercise | Q 4.3 | Page 128

Give scientific reasons

Rhinos were restored in Dudhwa forest.

Solution: Rhinos had become extinct in the 20th century due to unrelenting hunting in the Dudhwa forest. However, they were again restored by the various measures taken up by the government. They were bred in captivity and then released in their habitats under observation.

Exercise | Q 5.1 | Page 128

Answer the following:

What are the effects of icreased population on ecosystem?

Solution: The population is increasing at an alarming rate and our natural resources are being used even at a faster rate. Increasing population has also lead to various devastating effects on our ecosystem as well. Increasing population has resulted in various problems like:

- Deforestation- Cutting down of trees for making space for more houses and other products has resulted in the decrease in the forest cover.
- Generation of waste- Increased population has resulted in the increased dumping of wastes by humans on earth. This waste has led to various types of pollution as most of it contains non biodegradable substances.
- Land degradation- Excessive use of fertilisers, pesticides and intensive farming has led to over exploitation of natural resources like land and water.
- Loss of biodiversity- Excessive minning, hunting of animals and cutting of trees has resulted in the loss of biodiversity of various regions. It has caused many animals and plants to become extinct.
- Industrialisation- More and more industries are being set up for which large areas of land are being cleared out and they are also one of the major sources of pollution.

Exercise | Q 5.2 | Page 128

Answer the following:

How is urbanization responsible for destruction of ecosystem?

Solution: Urbanisation is a term which refers to the general increase in population and the amount of industrialization of a settlement. Urbanisation leads to various problems like land insecurity, worsening water quality, excessive air pollution, noise and the problems of waste disposal.

Exercise | Q 5.3 | Page 128

Answer the following:

What are the reasons for war?

Solution: Wars can occur due to various reasons like differences and competition over land, water, mineral resources. It can also occur due to economic and political reasons.

Exercise | Q 5.4 | Page 128

Explain the interactions among the factors of an ecosystem.

Solution: Ecosystem is made up of two types of components - biotic and abiotic components. Abiotic factors include light, temperature, water, air, soil, inorganic nutrients, etc. They are the non-living components of any habitat. Biotic factors are the living components of any habitat. They include plants, animals, etc. Both the biotic and abiotic factors in an ecosystem interact with each to maintain the balance of an ecosystem. The abiotic factors play an important role in the distribution and survival of biotic factors in an ecosystem. The proportion of abiotic factors is not constant and always keeps on changing as they are used or excreted by the biotic factors. It is not only the abiotic factor which affects an ecosystem but the biotic factors also have an equal effect on abiotic components as well as other biotic components.

Exercise | Q 5.5 | Page 128

Answer the following:

Differentiate between evergreen forests and grasslands.

Solution:

Evergreen Forests	Grasslands
These land biomes are found in regions with surplous rains.	These land biomes are found in regions with long summers and limited rainfall.
They consiste of dense and multi layers of different types of trees.	They mainly consist of long grasses.

Exercise | Q 6 | Page 128

Describe the following pictures

Solution: Both the images represent three different types of habitats. The first image represents the desert while the second image represents grassland ecosystem and an aquatic ecosystem.

The first image shows a desert and the kind of plants and animals which are found in this type of habitat. There is cactus and camel in this image which are adapted to such harsh environment.

The second image shows a water body which is a type of aquatic ecosystem. It also shows grassland ecosystem which consists of long grasses and variety of plants and animals.