Chapter 1: Living World

EXERCISE [PAGE 5]

Exercise | Q 1. A. | Page 5
Choose correct option:
Which is not a property of living being?

1. Metabolism
2. **Decay**
3. Growth
4. Reproduction

SOLUTION

Decay

Exercise | Q 1. B. | Page 5
Choose correct option:
A particular plant is strictly seasonal plant. Which one of the following is best suited if it is to be studied in the laboratory?

1. **Herbarium**
2. Museum
3. Botanical garden
4. Flower exhibition

SOLUTION

Herbarium

Exercise | Q 1. C. | Page 5
Choose correct option:
A group of students found two cockroaches in the classroom. They had a debate whether they are alive or dead. Which life property will help them to do so?

1. Metabolism
2. Growth
3. **Irritability**
4. Reproduction

SOLUTION

Irritability

Exercise | Q 2 | Page 5
Distinguish between botanical gardens, zoological park and biodiversity park with reference to characteristics.

SOLUTION

	Botanical Gardens	Zoological Parks	Biodiversity Parks
1.	Plants of different varieties collected from different parts of the world are grown in vivo in a scientific and systematic manner in a botanical garden.	Zoological parks are places where wild animals are kept in captivity.	It is an assemblage of species that form self-sustaining communities on degraded/ barren landscape.
2.	It is a type of ex situ conservation.	It is a type of ex situ conservation.	It is a type of in situ conservation.
3.	It is related to conservation of various flora.	It is related to conservation of various fauna	It is related to conservation of all biodiversity.

Exercise | Q 3. A. | Page 5

Answer the following questions.
Jijamata Udyan, the famous zoo in Mumbai has acclimatised humbolt penguins. Why should penguins be acclimatised when kept at a place away from their natural habitat?

SOLUTION

Humboldt penguins are kept in temperature monitored chambers. Their food and habitat is maintained as per their natural habitat. This has made them acclimatized to the conditions of the zoo. If such care is not taken, penguins will not be able to survive in Mumbai's climate having higher temperatures and humidity. These conditions will cause death of penguins, hence they are acclimatized.

Exercise | Q 3. B. | Page 5

Answer the following questions.
Riya found peculiar plant on her visit to Himachal Pradesh. What are the ways she can show it to her biology teacher and get information about it?

SOLUTION

Riya can pluck the plant and take it to her teacher after preserving it in the form of herbarium. But this is not advisable as it destroys local biodiversity. Hence she can click pictures of the plant and take it to her teacher. Also by keen observation, the detailed structure of the plant can be noted.

Exercise | Q 3. C. | Page 5

Answer the following questions.
At Andaman, authorities do not allow tourists to collect shells from beaches. Why it must be so?

SOLUTION

1. Seashells are an important part of the coastal ecosystem and are crucial for the survival of various marine creatures.

2. They provide material for building nests of birds and also act as a substratum for attachment of algae, sea grass, sponges and various microbes.

3. Fishes use shells for hiding from predators, whereas hermit crabs use shells as temporary shelters.

4. Removal of seashells from seashores may also indirectly affect the rate of shoreline erosion.

   Hence, in an attempt to protect the ecosystem, authorities in Andaman do not allow tourists to collect shells from beaches.

Exercise | Q 3. D. | Page 5

Answer the following questions.

Why do we have green house in botanical gardens?

SOLUTION

When tourists collect the shells from beaches, it causes loss of biodiversity. Some shells may contain animal inside. This should be therefore avoided. By impact of tourists the natural ecosystem is also disturbed. There may be illegal trade of the collected shells and specimens. Therefore, authorities do not allow tourists to do so.

Exercise | Q 3. E. | Page 5

Answer the following questions.

What do you understand from terms like in situ and ex situ conservation?

SOLUTION

1. In situ conservation: It includes conservation of species in their natural habitats. Grazing, cultivation and collection of products from the forests is banned in such areas. Legally protected areas include national parks, wildlife sanctuaries and biosphere reserves.

2. Ex situ conservation: It includes conservation of species outside their natural habitats. Species are conserved in botanical gardens, culture collections and zoological parks.

Exercise | Q 4. A. | Page 5

Write short notes.

Role of human being in biodiversity conservation

SOLUTION

1. Due to rapid increase in human population and industrialization, humans have over utilized natural resources; leading to degradation of the environment and hence only humans can help conserve the ecosystem.

2. Humans are capable of conserving and improving the quality of nature and thus, can play a major role in biodiversity conservation.

3. In order to conserve biodiversity and its environmental resources, humans must use the resources rationally and avoid excessive degradation of environment.

4. Human beings are stakeholders of the environment and need to come together to overcome pollution and improve the environment quality in order to conserve biodiversity. E.g. Ban or limit on use of harmful products (plastic, chemicals, etc.) that are toxic to various birds, animals, etc.

5. Human beings also play a role in conservation of biodiversity by establishment of various sites for in situ (national parks, wildlife sanctuaries and biosphere reserves) and ex situ (botanical gardens, culture collections and zoological parks) conservation.

Exercise | Q 4. B. | Page 5

Write short notes.
Importance of botanical garden.

SOLUTION

1. Local flora is recorded in the botanical gardens.
2. There is collection of monographic works.
3. Living plant material and preserved specimens whlch are needed for studies and research are kept in collection here.
4. Seeds and plants can be supplied from botanical gardens.
5. Greenhouse is maintained for the cultivation of rare and uncommon plants.
6. There is research laboratory associated with some of the botanical gardens.

Exercise | Q 5 | Page 5
How can you, as an individual, prevent the loss of Biodiversity?

SOLUTION

As individuals, we can prevent loss of biodiversity in the following ways:

1. Increasing awareness about environmental issues. Making posters that provide more information about biodiversity conservation, to raise public awareness.

2. Increased support and/or active participation in government policies and actions laid down for conservation of biodiversity.
3. Protect various plant and animal species in our surrounding.
4. Set up bird and bat houses wherever possible.
5. Prevent felling of trees especially native plants or trees in a particular area.
6. Reduce, recycle and reuse resources. Especially, reduce pollution and use of plastic bags and other materials that are potential threats for the environment.
7. Use environment friendly products, segregate and dispose garbage correctly.
8. Convince people about the importance of trees and the need to participate in tree plantation campaign.
9. Obey the rules that fall under Biodiversity Act.