



## Conservation of Plants & Animals

Conservation, sustainable use and protection of natural resources including plants, animals, mineral deposits, soils, clean water, clean air, and fossil fuels such as coal, petroleum, and natural gas. Natural resources are grouped into two categories, renewable and nonrenewable. A renewable resource is one that may be replaced over time by natural processes, such as fish populations or natural vegetation, or is inexhaustible, such as solar energy. Nonrenewable resources are those in limited supply that cannot be replaced or can be replaced only over extremely long periods of time. Nonrenewable resources include fossil fuels and mineral deposits, such as iron ore and gold ore. Conservation activities for nonrenewable resources focus on maintaining an adequate supply of these resources well into the future.



Natural resources are conserved for their biological, economic, and recreational values, as well as their natural beauty and importance to local cultures. For example, tropical rain forests are protected for their important role in both global ecology and the economic livelihood of the local culture; a coral reef may be protected for its recreational value for scuba divers; and a scenic river may be protected for its natural beauty.



## Biodiversity Conservation

Biodiversity, or biological diversity, denotes the number and variety of different organisms and ecosystems in a certain area. Preserving biodiversity is essential for ecosystems to respond flexibly to damage or change. For example, a single - species corn crop may be quickly destroyed by a certain insect or disease, but if several different species of corn are planted in the field, some of them may resist the insect or disease and survive.

Humans benefit greatly from the many medicines, crops, and other products that biodiversity provides. As many as 40 percent of our modern pharmaceutical medicines are derived from plants or animals. For instance, a small plant from Madagascar, the rosy periwinkle, produces substances that are effective in fighting two deadly cancers, Hodgkin's disease and leukemia.

Unfortunately, human activities have greatly reduced biodiversity around the world. The 20th century encompasses one of the greatest waves of extinction, or elimination of species, to occur on the planet. The greatest threat to biodiversity is loss of habitat as humans develop land for agriculture, grazing livestock, industry, and habitation. The most drastic damage has occurred in the tropical rain forests, which cover less than seven percent of the Earth's surface but contain well over half of the planet's biodiversity. Only 8 percent of the rain forests in Madagascar, home of the rosy periwinkle, remain intact.



## Deforestation

Deforestation means large-scale removal of forest prior to its replacement by other land uses. Forests are removed for a variety of reasons, including agriculture, timber harvesting, and mining, and to make way for roads, dams, and human settlements.

At the end of the 20th century, the World Resources Institute estimated that tropical forests alone were disappearing at the rate of 16 to 20 million hectares (40 to 50 million acres) per year—about 0.6 hectares (1.5 acres) per second largely due to increasing demands for agricultural land and timber resources.



## Protected Areas

Protected areas are areas of land or sea especially dedicated to the protection and maintenance of biodiversity. These are managed through legal means and have been set up within the legal frame work of Indian wildlife (Protection) Act,1972. Examples of protected areas are national parks and wildlife sanctuaries.



## National Parks

A national park is a large area dedicated to conserve the environmental, natural resources and the wildlife therein. In a national park,

- ❖ Private rights are non-existent.
- ❖ Forestry operations, grazing of animals and hunting of animals are prohibited.
- ❖ Visitors are allowed to enter only for study, cultural and recreative purposes.
- ❖ Exploitation of habitat or wildlife is banned.



## Wildlife Sanctuaries

A wildlife sanctuary is similar to a national park. However, it aims only at conservation of species. The wildlife sanctuaries have the following features:

- ❖ The boundary of a sanctuary is not limited by state legislation.
- ❖ The killing, hunting or capturing of any species is prohibited.
- ❖ Private ownership may be allowed to continue in a sanctuary.
- ❖ Forestry and other usages may be permitted, but to the extent that they do not affect wildlife adversely.



## Forest Reserves

These forests are primarily reserved for raising trees for the production of timber or wood for industrial use. They also provide other products such as pulp, cellulose and medicinal plants. These forests cover 54.4% of the total forests area of 76.5 million hectares of land.



## Zoological Gardens

Zoological gardens or parks and zoos are places where the wild animal are kept in a protected environment under human care for public display. All the animals in a zoo are provided with the conditions similarto their natural habitats as far as possible. The aim is to enable us to learn about their behaviour and food habits.



## Botanical Gardens

Botanical Gardens play an important role in the conservation of plants species. They have collections of living plants for reference. Plant species are grown for identification purposes and each plant is labelled to indicate its scientific name, common name and vernacular name. a famous botanical garden of India is the Indian Botanical Garden situated at HOWRAH (Kolkata).

### Commonly Asked



#### QUESTIONS



Which one of the following is a renewal resource?

- (a) Petroleum
- (b) Coal
- (c) Mineral deposits
- (d) Solar energy
- (e) None of these

**Answer: (d)**



Which one of the following statements is true?

**Statement 1:** Botanical garden play an important role in the conservation of plant species.

**Statement 2:** Botanical garden play an important role in the conservation of animals species.

- (a) Statement 1
- (b) Statement 2
- (c) Both statements are correct
- (d) Both statements are incorrect
- (e) None of these

**Answer: (a)**

## SUMMARY



- ❖ Biodiversity, or biological diversity, denotes the number and variety of different organisms and ecosystems in a certain area
- ❖ The greatest threat to biodiversity is loss of habitat as humans develop land for agriculture, grazing livestock, industry, and habitation
- ❖ Deforestation means large-scale removal of forest prior to its replacement by other land uses
- ❖ Protected areas are areas of land or sea especially dedicated to the protection and maintenance of biodiversity.
- ❖ Zoological gardens or parks and zoos are places where the wild animal are kept in a protected environment.

# Self Evaluation **TEST**



Duration  
**10 Minutes**

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**1. Which one of the following is an extinct species?**

- (a) Caspian tiger
- (b) Snow leopard
- (c) Seals
- (d) Siberian crane
- (e) None of these

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**2. The cutting down of forests over a wide area is called?**

- (a) Plantation
- (b) Afforestation
- (c) Deforestation
- (d) All of these
- (e) None of these

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**3. Which one of the following statements is correct?**

**Statement 1:** Deforestation is one of the biggest threat to the existence of wild life

**Statement 2:** Deforestation will disturb the balance in ecosystem

- (a) Statement 1
- (b) Statement 2
- (c) Both statements are correct
- (d) Both statements are incorrect

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**4. Which one of the following is a aim of a biosphere reserve?**

- (a) Conservation of wildlife
- (b) Conservation of biodiversity
- (c) Conservation of endangered species
- (d) All of these
- (e) None of these

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**5. The innermost zone of a biosphere reserve is known as:**

- (a) Core zone
- (b) Buffer zone
- (c) Transition zone
- (d) Outerzone
- (e) None of these

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**6. Which one of the following statements is correct?**

**Statement 1:** A biosphere reserve may also contains wildlife sanctuary and national park

**Statement 2:** There are 14 biosphere reserves in India

- (a) Statement 1
- (b) Statement 2
- (c) Both statements a re correct
- (d) Both statements are incorrect

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**7. Which one of the following statements is correct?**

**Statement 1:** A wildlife sanctuary is a area in which hunting is allowed

**Statement 2:** In a wildlife sanctuary killing and capturing of wild animals is strictly prohibited

- (a) Statement 1  
(b) Statement 2  
(c) Both statements are correct  
(d) Both statements are incorrect
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**8. Which one of the following is not correct about wildlife sanctuary?**

- (a) A wildlife sanctuary occupies a comparatively smaller area of land  
(b) Local peoples form an integral part of a wildlife sanctuary  
(c) A wildlife sanctuary is mainly for the protection of wild animals of the area in their natural habitat  
(d) All of these  
(e) None of these
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**9. Which one of the following statements is correct?**

**Statement 1:** The exploitation of natural resources in a national park is strictly prohibited

**Statement 2:** The human activities such as mining, hunting and fishing are allowed inside a national park

- (a) Statement 1  
(b) Statement 2  
(c) Both statements are correct  
(d) Both statements are incorrect
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**10. The species which are facing the risk of extinction are called:**

- (a) Extincted species  
(b) Protected species  
(c) Private species  
(d) Endangered species  
(e) None of these
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**Answers – Self Evaluation Test**

1. A	2. C	3. C	4. D	5. A	6. C	7. B	8. B	9. A	10. D
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