

Q1 Multiple choice questions.

(i) Which of these statements is not a valid reason for the depletion of flora and fauna?

- (a) Agricultural expansion.
- (b) Large scale developmental projects.
- (c) Grazing and fuel wood collection.
- (d) Rapid industrialization and urbanization.

Answer. (c) Grazing and fuel wood collection

(ii) Which of the following conservation strategies do not directly involve community participation?

- (a) Joint forest management
- (b) Beej Bachao Andolan
- (c) Chipko Movement
- (d) Demarcation of Wildlife sanctuaries

Answer. (d) Demarcation of Wildlife sanctuaries

Q2. Match the following animals with their category of existence.

Animals/Plants	Category of existence
(a) Black buck	(i) Endangered
(b) Asiatic elephant	(ii) Vulnerable
(c) Andaman wild pig	(iii) Endemic
(d) Himalayan Brown bear	(iv) Rare
(e) Pink head duck	(v) Extinct

Q3. What are reserved, protected and unclassified forests?

- (a) **Reserved forests:-** Reserved forests are those forests which are considered as most valuable as far as the conservation of forests and wildlife is concerned.
- (b) **Protected forests:-** Protected forests are those forests which are protected from any further depletion.
- (c) **Unclassified forests:-** Unclassified forests are those forests and wastelands which belong to both government and private individuals and communities.

Q4 Answer the following questions in about 30 words.

(i) What is biodiversity? Why is biodiversity important for human lives?

Ans:- Biodiversity is the variation of wildlife and cultivated species in a given ecosystem. Humans along with other living organisms form interconnected web, each organism is a producer, consumer or decomposer. These organisms, depend on this system for their existence, i.e. why biodiversity is important for human lives.

(ii) How have human activities affected the depletion of flora and fauna? Explain.

Ans:- Human activities such as poaching, deforestation, the expansion of railways, agriculture, commercial and scientific forestry, and mining are to blame for the depletion of flora and fauna.

Q5. Answer the following questions in about 120 words.

(i) Describe how communities have conserved and protected forests and wildlife in India?

Ans:- Indian forests are home to different communities. These communities have a complex relationship with their environment. These communities have adapted various conservation strategies which are people centric, environment-friendly and economically rewarding.

These conservation techniques adopted in India are;

- *In Sariska Tiger Reserve, Rajasthan, villagers have fought against mining by citing the Wildlife Protection Act.*
- *In Alwar district of Rajasthan villagers have made Bhairodev Davak 'Sonchari' for protecting wildlife and have their own rules and regulations for forest conservation.*
- *Chipko (Hugging trees) movement in the Himalyas successfully resisted deforestation.*
- *Beej Bachao Andolen in Tehri and Navdanya are for diversification of crops .*
- *Many societies in our country worship trees know as Sacred grooves.*

- *The Mundas people of Chhota Nagpur worship Mahua trees and the tribals of Orissa and Bihar worship the Tamarind and Mango trees during wedding . Many Indians worship Peepal, Tulsi and Banyan trees.*

(ii) Write a note on good practices towards conserving forest and wildlife.

Answer. Good practices towards conserving forest and wildlife are plenty. Central, state governments, many non-governmental Organizations and various local communities are working towards creating public awareness for conserving, depleting forest cover and vanishing wildlife. In india various steps in this manner have been taken some are as under;

- *The Indian Wildlife Protection Act was implemented in 1972, with various provisions for protecting habitats.*
- *All India list of protected species was also published.*
- *Hunting was banned to endangered species, their habitats were given legal protection and their trade was being restricted to protect their remaining population.*
- *Various national parks and wildlife sanctuaries were established by central and many state governments.*
- *Several projects for protecting specific species of various animals were taken which were gravely threatened including Tiger, One Horned Rhinoceros, Kashmiri Stag (Hungal), Three types of Crocodiles, Indian Elephant, Black Buck, Great Indian Busturd and Snow Leopard etc. against hunting and trade throughout India.*
- *Joint Forest management programmes also involved local communities in management and restoration of degraded forests.*

Q No. 1:- What is biodiversity?

Answer:- Biodiversity: The variety of flora and fauna in a given geographical area is called biodiversity of that area.

Q No. 2:- India is one the world's richest countries in terms of vast array of Flora and Fauna. Justify this statement?

Answer:- India is one of the world's richest countries in terms of its vast array of biological diversity, and has nearly 8 per cent of the total number of species in the world (estimated to be 1.6 million).

Q No.3:- Name the species of plants and animals which are catogorised as critical or they are on the verge of extinction. What is the total number of these species in India which are considered as endangered?

Answer:- List of Critically Endangered Species:

- **Cheetah,**
- **Pink-headed Duck,**
- **Mountain Quail,**
- **Forest Spotted Owl,**
- **madhucha insignis (wild mahua),**
- **hubbardia heptaneuron (a grass species)**

Number of Endangered Species: 79 species of mammals, 44 of birds, 15 of reptiles, and 3 of amphibians, 1,500 plant species are considered endangered.

Q No.4:- Classify the different categories of exiseting plants and animal species of the country which are based on the International Union for Conservation of Natural and Natural Resources (IUCN)?

Answer:- Classification Based on the International Union for Conservation of Nature and Natural Resources (IUCN):

Normal Species: If the population level of species is within normal range for their survival, it is called normal species, e.g. cattle, pine, sal, rodents, etc.

Endangered Species: Species which are in danger of extinction are called endangered species, e.g. black buck, crocodile, Indian wild ass, Indian rhino, lion tailed macaque, sangai (brow antler deer in Manipur), etc.

Vulnerable Species: If the population of a species has declined to such a level that it is likely to become endangered; it is called vulnerable species, e.g. blue sheep, Asiatic elephant, Gangetic dolphin, etc.

Rare Species: If the population of a species so small that it can become vulnerable or endangered, it is called rare species, e.g. Himalayan brown bear, wild Asiatic buffalo, desert, fox, hornbill, etc.

Endemic Species: A species which found only in a particular geographical area is called an endemic species, e.g. Andaman teal, Nicobar pigeon, Andaman wild pig, mithun in Arunachal Pradesh, etc.

Extinct Species: A species which no longer exists is called an extinct species. A species may be extinct from a local area, region, country, continent or the entire earth. Examples: Asiatic cheetah, pink head duck, etc.

Q No.5:- What are the causes of Depletion of Flora and Fauna

Answer:- Causes of Depletion of Flora and Fauna:

Agricultural Expansion: According to the Forest Survey of India, over 262,000 sq km of forest area was converted into agricultural land in India between 1951 and 1980. Moreover, a substantial part of the tribal belts has been deforested or degraded by shifting cultivation.

Enrichment Plantation: Enrichment plantation was done to promote a few favoured species in many parts of India. This practice involves plantation of a single commercially valuable species. This leads to elimination of other species.

Development Projects: Large scale development projects have also contributed significantly to the loss of forests. Over 5,000 sq km of forest was cleared for river valley projects since 1951.

Mining: Mining has also caused large scale depletion of flora and fauna in many areas. For example; the ongoing dolomite mining is seriously threatening the Buxa Tiger Reserve in West Bengal.

Unequal Access to Resources: Social inequality is another major factor to depletion of flora and fauna. The rich people consume much more than the poor and thus cause a higher degree of environmental damage.

Q No.6:- What are the Social Effect of Resource Depletion:

Answer:- Social Effect of Resource Depletion:

In many societies, it is the women who are responsible for collection of fuel, fodder, water and other basic subsistence needs. Depletion of these resources means women need to work harder to collect those resources. At some places, women may have to walk more than 10 km to collect firewood. This causes serious health problems for women.

Deforestation induced flood and draught result in economic misery for the poor.

Deforestation also leads to loss of cultural diversity. The marginalized people who had been traditionally dependent on forest for sustenance are now forced to look for other sources of livelihood. In order to do so, they are uprooted from their traditional habitat and culture.

Q No.7:- Write a short note on the Indian Wildlife Protection Act 1972?

Answer:- *The Indian Wildlife (Protection) Act 1972: In the 1960s and 1970s, the conservationists demanded some rules to protect the wildlife. Conceding to their demand, the government enacted the Indian Wildlife (Protection) Act 1972. Under this act, an all India list of protected species was published. Hunting was banned to protect the remaining population of some endangered species. Trade in wildlife was restricted and the habitats of wildlife were given legal protection many national parks and wildlife sanctuaries were established by various state governments and the central government. Several projects were announced for protecting specific animals, e.g. Project Tiger.*

Q No.8:- What are the benefits of Conservation?

Answer:- *Conservation helps in preserving ecological diversity and our life support systems; water, air and soil.*

It preserves the genetic diversity of plants and animals.

Q No.9:- How has government's categorization of Forests?

Answer:- Government's categorization of Forests as:

Reserved Forests: *More than half of the total forest land has been declared reserved forests. These are considered as the most valuable from conservation perspective.*

Protected Forests: *Almost one-third of the total forest area is protected forest. The protected forests are protected from any further depletion.*

Unclassed Forests: *Forests which do not come under either of the above two categories are called unclassed forests.*

Q No.10:- What are the new trends in conservation policy?

Answer:- New Trends In Conservation Policy

Increase Biodiversity: The new trend in conservation policy is the focus on biodiversity rather than on a few of its components. So, instead of just focusing on bigger mammals; like tiger and lion, even insects are finding a place in conservation planning. New notifications were issued under Wildlife Act of 1980 and 1986. As per them; several hundred butterflies, moths, beetles and one dragonfly have been added to the list of protected species. Six species of plants were added to the list in 1991.

Community and Conservation: Many local communities have recognized that conservation can secure their long-term livelihood. At many places, such communities are coordinating with government officials in conservation efforts.

At Sariska Tiger Reserve (Rajasthan), villagers have fought against mining by citing the Wildlife Protection Act.

The Chipko Movement is a good example of community participation in conservation programme.

Farmers and citizen's groups like the Beej Bachao Andolan in Tehri and Navdanya have shown that adequate levels of diversified crop production without the use of synthetic chemicals are possible and economically viable.

Rejecting government involvement: In many villages, people are protecting habitats and are explicitly rejecting government involvement. For example; the inhabitants of five villages in Alwar district of Rajasthan have declared 1,200 hectares of forest as the Bhairodev Dakav 'Soncuri'. They have declared their own set of rules and regulation to protect the wildlife.

Nature worship: It is an age old custom in the Hindu religion and in many tribes. Sacred groves in forests are the result of this tradition. Such spots in forests are untouched by human intervention.

The Mundas and the Santhals of Chhota Nagpur region worship mahua (*Bassia latifolia*) and kadamba (*Anthocaphalus cadamba*) trees. Similarly, the tribals of Orissa and Bihar worship the tamarind (*Tamarindus indica*) and mango (*Mangifera indica*); as part of wedding rituals.

Monkeys are considered the representatives of the Hindu god Hanuman. At most of the places people do not harm monkeys or langurs because of this belief. In and around Bishnoi villages in Rajasthan, chinkara, nilgai and peacocks are protected by the community and nobody harms them.

The Joint Forest Management (JFM) programme: This is another example of involvement of local communities in forest management. This programme has been in practice in Orissa since 1988. Under this programme, the local villagers form some institutions and manage the conservation activities. In lieu of that, they get the right to take and utilize some forest resources.

Q No. 11:- Write a short note on Project Tiger.

Answer:- Project Tiger was launched in 1973; to protect tigers from becoming extinct. At the turn of the 20th century, the tiger population was around 55,000 which dwindled to 1,827 by 1973.

Threats for Tiger Population: Poaching for trade, shrinking habitat, depletion of base prey species, growing human population, etc.

Current Status: 27 tiger reserves covering 37,761 sq km.

Important Tiger Reserves: Corbett National Park (Uttarakhand), Sunderband National Park (West Bengal), Bandhavgarh National Park (Madhya Pradesh), Sariska Wildlife Sanctuary (Rajasthan), Manas Tiger Reserve (Assam) and Periyar Tiger Reserve (Kerala)