

Forest and Wildlife Resources

Fastrack Revision

- ▶ We humans along with all living organisms form a complex web of ecological system in which we are only a part of and very much dependent on this system for our own existence.
- ▶ Forests play a key role in the ecological system as these are also the primary producers on which all other living beings depend.
- ▶ Biodiversity or Biological Diversity is immensely rich in wild life and cultivated species, diverse in form and function but closely integrated in a system through multiple network of interdependencies.
- ▶ The destruction of forests and wildlife is not just a biological issue. It affects forest and tribal communities also. The following are the effects of destruction of flora and fauna:
 - ▶ Loss of cultural diversity.
 - ▶ Women are affected more than men in the form of serious health problems.
 - ▶ Indirect impact of degradation such as severe draught or deforestation - induced floods, etc., on the poor.
- ▶ The Indian wildlife (Protection) Act was implemented in 1972 with various provisions for protecting habitats. Central and many State Governments established national parks and wildlife sanctuaries.
- ▶ Project Tiger, one of the well publicised wildlife campaigns in the world, was launched in 1973. Corbett National Park in Uttarakhand, Sunderbans National Park in West Bengal, Bandhavgarh National Park in Madhya Pradesh, Sariska Wildlife Sanctuary in Rajasthan, Manas Tiger Reserve in Assam and Periyar Tiger Reserve in Kerala are some of the tiger reserves of India.
- ▶ In India, forest and wildlife resources are either owned or managed by the government through the forest.
- ▶ Department or other government departments. These are classified under the following categories:
 - ▶ **Reserved Forests:** More than half of the total forest land has been declared reserved forests. Reserved forests are regarded as the most valuable as far as the conservation of forest and wildlife resources are concerned.
 - ▶ **Protected Forests:** Almost one-third of the total forest area is protected forest, as declared by the Forest Department. This forest land are protected from any further depletion.
 - ▶ **Unclassed Forests:** These are other forests and wastelands belonging to both government and private individuals and communities. All North-Eastern states and parts of Gujarat have a very high percentage of their forests as unclassified forests managed by local communities.
- ▶ It is not only the government's duty to conserve forest and wildlife resources. The community can also play an important role in their conservation.
- ▶ In Sariska Tiger Reserve, Rajasthan, villagers have fought against mining by citing the wildlife Protection Act.
- ▶ The Inhabitants of five villages in the Alwar district of Rajasthan have declared 1,200 hectares of forest as the Bhairodev Dakav 'Sonchuri', declaring their own set of rules and regulations which do not allow hunting and are protecting the wildlife against any outside encroachments.
- ▶ The Mundas and the Santhal of Chota Nagpur region worship mahua (*Bassia latifolia*) and kadamba (*Anthocaphalus cadamba*) trees and the tribals of Odisha and Bihar worship the tamarind (*Tamarindus indica*) and mango (*Mangifera indica*) trees during weddings. To many of us, peepal and banyan trees are considered sacred and so we ensure that these trees are not cut.
- ▶ The famous **Chipko movement** in the Himalayas has not only successfully resisted deforestation in several areas but has also shown that community afforestation with indigenous species can be enormously successful.
- ▶ 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.
- ▶ In India, Joint Forest Management (JFM) programme furnishes a good example for involving local communities in the management and restoration of degraded forests.



Practice Exercise

Multiple Choice Questions ↘

- Q1. Which of the following play a key role in the ecological system?
- Humans
 - Forests
 - Micro-organisms
 - Living beings

- Q2. Which one of the following is not responsible for the decline in India's biodiversity?
- Mining activities
 - Hunting and poaching
 - Forest fire
 - Afforestation
- Q3. Which one of the following is not a direct outcome of environmental destruction?
- Biological loss
 - Loss of cultural diversity
 - Severe droughts
 - River Valley Projects



- Q 4. Which of these statements is not a valid reason for the depletion of flora and fauna?**
- Agricultural expansion
 - Large-scale development projects
 - Grazing and fuel wood collection
 - Rapid industrialisation and urbanisation

Knowledge BOOSTER

The diverse flora and fauna of the planet are under great threat mainly due to insensitivity to our environment.

- Q 5. In which one of the following states is Periyar Tiger Reserves located?**
- Rajasthan
 - Assam
 - Uttarakhand
 - Kerala
- Q 6. The Indian Wildlife (Protection) Act was implemented in, with various provisions for protecting habitats.**
- 1972
 - 1975
 - 1971
 - 1974
- Q 7. Which of the following animals were gravely threatened, and the Central Government announced several projects for protecting them?**
- Kashmir stag
 - The Asiatic lion
 - One-horned rhinoceros
 - All of these
- Q 8. Manas Tiger Reserve is located in**
- Tamil Nadu
 - Kerala
 - Assam
 - Odisha
- Q 9. Which of the following is located in the state of Rajasthan?**
- Corbett National Park
 - Bandhavgarh National Park
 - Periyar Tiger Reserve
 - Sariska Wildlife Sanctuary
- Q 10. has the largest area under permanent forests, constituting 75 per cent of its total forest area.**
- Odisha
 - Madhya Pradesh
 - Chhattisgarh
 - Assam
- Q 11. Substantial parts of the tribal belts in North-Eastern India, have been deforested by:**
- shifting cultivation
 - mining
 - Infrastructure development
 - None of the above
- Q 12. Extensive planting of a single commercially valuable species is called:**
- Jhumming
 - Intensive subsistence farming
 - Mixed farming
 - Enrichment plantation

Knowledge BOOSTER

Enrichment plantation practice is responsible for eliminating many species in India. One of its example is teak monoculture in South India.

- Q 13. Teak monoculture has damaged the natural forests in:**
- Ganga Plain
 - South India
 - Brahmaputra Plain
 - None of these

- Q 14. Chir Pine plantations in the Himalayas have replaced the:**
- Himalayan oak and rhododendron
 - Teak and sal
 - Babul and Mexican kikar
 - None of the above
- Q 15. We need to conserve our forests and wildlife:**
- to preserve the ecological diversity.
 - to preserve the genetic diversity.
 - for maintenance of aquatic biodiversity.
 - so, that we are able to over-extract plant and animal species.
- Q 16. Which is not a threat to tiger population in India?**
- Shrinking habitat
 - The trade of tiger skins
 - Use of their bones in traditional medicines
 - Project Tiger
- Q 17. Reserved and protected forests are also referred to as:**
- Unclassed forest
 - Permanent forest estate
 - Open forest
 - Mangrove forest
- Q 18. Unclassed forests are mainly found in:**
- All North-Eastern states and parts of Gujarat
 - Kerala and Tamil Nadu
 - Punjab and Haryana
 - West Bengal and Bihar
- Q 19. Sacred groves are:**
- parts of large forests that have been left untouched by the local people.
 - places for grazing animals.
 - forests earmarked for commercial felling of trees.
 - forests used for planting trees with medicinal properties.
- Q 20. The Chipko Movement in the Himalayas to protect the forest cover was started by:**
- Sunder Lal Bahuguna
 - Dr. Anil Agarwal of CSE
 - Dr. Aruna Roy of Kisan Mazdur Vikas
 - Medha Patkar
- Q 21. Which of the following conservation strategies do not directly involve community participation?**
- Joint Forest Management
 - Beej Bachao Andolan
 - Chipko Movement
 - Demarcation of Wildlife Sanctuaries
- Q 22. When was the Wildlife Protection Act implemented?** (CBSE 2023)
- 1972
 - 1978
 - 1980
 - 1985
- Q 23. Match the Column-I with Column-II and choose the correct option:** (CBSE 2023)

Column I (Resources)	Column II (Example)
A. Biological	1. Coal
B. Renewable	2. Wildlife
C. Non-renewable	3. Solar Energy

	A	B	C
a.	1	3	2
b.	3	2	1
c.	2	3	1
d.	1	2	3

Q 24. Which of the following options represent potential measures that can be taken to mitigate the threats posed by mining activities on the Buxar tiger reserve's ecosystem and biodiversity?

(CBSE SQP 2023-24)

Statement (I): Implementing stricter regulations and monitoring mechanisms.

Statement (II): Enforcing buffer zones around protected areas.

Statement (III): Promoting alternative livelihoods and sustainable economic development in the surrounding communities.

Statement (IV): Displacement of Tiger Reserve from Buxar.

- Statements (I) and (II) are correct.
- Statements (II), (III) and (IV) are correct.
- Statement (II) is correct.
- Statements (I), (II) and (III) are correct.

Q 25. Read the following statements carefully and choose the correct option:

Statement (I): Forests play a key role in the ecological system.

Statement (II): Forests are the primary producers on which all other living beings depend.

- Statement (I) is correct and (II) is incorrect.
- Statement (I) is incorrect and (II) is correct.
- Both statements are incorrect.
- Both statements are correct.

Q 26. Read the following statements carefully and choose the correct option:

Statement (I): Destruction of forests and wildlife resulted into the loss of cultural diversity.

Statement (II): The conservation of forests and wildlife is essential to provide a better quality of life.

- Statement (I) is correct and (II) is incorrect.
- Statement (I) is incorrect and (II) is correct.
- Both statements are incorrect.
- Both statements are correct.

Q 27. Read the following statements carefully and choose the correct option:

Statement (I): We need to conserve our forests and wildlife.

Statement (II): Rapid decline in wildlife population and forestry has been observed.

- Statement (I) is correct and (II) is incorrect.
- Statement (I) is incorrect and (II) is correct.
- Both statements are incorrect.
- Both statements are correct.

Q 28. Read the following statements carefully and choose the correct option:

Statement (I): Reserved and protected forests are called permanent forest estates.

Statement (II): Forest provide us timber.

- Statement (I) is correct and (II) is incorrect.
- Statement (I) is incorrect and (II) is correct.
- Both statements are incorrect.
- Both statements are correct.



Assertion & Reason Type Questions

Directions (Q.Nos. 29-33): In the following questions given below, there are two statements marked as Assertion (A) and Reason (R). Read the statements and choose the correct option:

- Both Assertion (A) and Reason (R) are correct and Reason (R) is the correct explanation of Assertion (A).
- Both Assertion (A) and Reason (R) are correct, but Reason (R) is not the correct explanation of Assertion (A).
- Assertion (A) is true, but Reason (R) is false.
- Assertion (A) is false, but Reason (R) is true.

Q 29. Assertion (A): Forests play a key role in the ecological system.

Reason (R): Forests are the primary producers on which all other living beings depend.



TIP

The plants, animals and microorganisms re-create the quality of the air we breathe, the water we drink and the soil that produces our food without which we cannot survive. Thus, we are very much dependent on this system for our own existence.

Q 30. Assertion (A): We need to conserve our forests and wildlife.

Reason (R): Rapid decline in wildlife population and forestry has been observed.



TIP

Conservation preserves the ecological diversity and our life support systems and also preserves the genetic diversity of plants and animals for better growth of species and breeding. Thus, there is a need for conservation of our forests and wildlife.

Q 31. Assertion (A): Tiger population is not on the verge of extinction.

Reason (R): Tiger population in forests is increasing rapidly day-by-day.



TIP

Tiger population is on the verge of extinction and the major threats to tiger population are numerous, such as poaching for trade, shrinking habitat, depletion of prey base species and growing human population.

Q 32. Assertion (A): Destruction of forests and wildlife resulted into the loss of cultural diversity.

Reason (R): The conservation of forests and wildlife is essential to provide a better quality of life.

TIP

The destruction of forests and wildlife has affected the livelihood of many communities who are dependent on forests, thus, resulting in loss of cultural diversity and severe droughts and floods. However, the reason does not explain the assertion.

Q 33. Assertion (A): The tree is a peculiar organism of unlimited kindness.

Reason (R): Trees are living organisms which makes no demands for its sustenance, and extends generously the products of its life activity.

TIP

Trees affords protection to all beings, offering shade even to the axe men who destroy it. Therefore, the tree is an organism of unlimited kindness that extends generosity to humanity.

Answers

1. (b) 2. (d) 3. (c) 4. (d) 5. (d)
6. (a) 7. (d) 8. (c) 9. (d) 10. (b)
11. (a) 12. (d) 13. (b) 14. (a) 15. (d)
16. (d) 17. (b) 18. (a) 19. (a) 20. (a)
21. (d) 22. (a) 23. (c) 24. (d) 25. (d)
26. (a) 27. (d) 28. (d) 29. (a) 30. (a)
31. (d) 32. (b) 33. (a)



Source Based Questions

Source 1

Read the source given below and answer the questions that follow:

In the 1960s and 1970s, conservationists demanded a national wildlife protection programme. The Indian Wildlife (Protection) Act was implemented in 1972, with various provisions for protecting habitats. An all-India list of protected species was also published. The thrust of the programme was towards protecting the remaining population of certain endangered species by banning hunting, giving legal protection to their habitats, and restricting trade in wildlife. Subsequently, central and many state governments established national parks and wildlife sanctuaries about which you have already studied. The Central Government also announced several projects for protecting specific animals, which were gravely threatened, including the tiger, the one-horned rhinoceros, the Kashmir stag or hangul, three types of crocodiles – fresh water crocodile, saltwater crocodile and the Gharial, the Asiatic lion, and others. Most recently, the Indian elephant, black buck (chinkara), the great Indian bustard (godawan) and the snow leopard, etc. have been given full or partial legal protection against hunting and trade throughout India.

Q 1. In which year, the Indian Wildlife (Protection Act) as implemented?

- a. 1970 b. 1971 c. 1972 d. 1974

Q 2. In what way could the wildlife protection programme protect the population of endangered species?

- a. Banning hunting.
b. Giving legal protection to their habitats.
c. Restricting trade in wildlife.
d. All of the above.

Q 3. Which of the following animals have been given full or partial legal protection against hunting and trade?

- a. Indian elephant b. Black buck (chinkara)
c. Great Indian bustard d. All of these

Q 4. What is the term used for the plant and animal species which are in danger of getting extinct?

- a. Extinct species b. Endangered species
c. Threatened species d. Vulnerable species

Q 5. Which of the following is an example of threatened species?

- a. Gangetic dolphin b. Nicobar pigeon
c. Asiatic cheetah d. Asiatic lion

Q 6. Which of the following animals have been announced to be protected by the Central Government?

- a. One-horned rhinoceros b. Kashmir stag
c. Asiatic lion d. All of these

Answers

1. (c) 2. (d) 3. (d) 4. (b) 5. (d) 6. (d)

Source 2

Read the source given below and answer the questions that follow by choosing the most appropriate option:

Nature worship is an age old tribal belief based on the premise that all creations of nature have to be protected. Such beliefs have preserved several virgin forests in pristine form called Sacred Groves (the forests of God and Goddesses). These patches of forest or parts of large forests have been left untouched by the local people and any interference with them is banned.

Certain societies revere a particular tree which they have preserved from time immemorial. The Mundas and the Santhal of Chota Nagpur region worship mahua (*Bassia latifolia*) and kadamba (*Anthocaphalus cadamba*) trees, and the tribals of Odisha and Bihar worship the tamarind (*Tamarindus indica*) and mango (*Mangifera indica*) trees during weddings. To many of us, peepal and banyan trees are considered sacred.

Indian society comprises several cultures, each with its own set of traditional methods of conserving nature and its creations. Sacred qualities are often ascribed to springs, mountain peaks, plants and animals which are closely protected. You will find troops of macaques and langurs around many

temples. They are fed daily and treated as a part of temple devotees. In and around Bishnoi villages in Rajasthan, herds of blackbuck, (chinkara), nilgai and peacocks can be seen as an integral part of the community and nobody harms them.

Q 1. How is nature worship an age old tribal belief ?

Ans. Nature worship is an age old tribal belief as it is based on the promise that all creations of nature have to be protected. Such beliefs have preserved several virgin forests in pristine form called Sacred groves. These patches of forests, have been left untouched by the local people and any interference with them is banned.

Q 2. Which tribal societies used to worship trees during weddings?

Ans. The Mundas and the Santhal of Chota Nagpur region worship mahua (*Bassia latifolia*) and Kadamba trees. The tribes of Odisha and Bihar worship the tamarind and mango trees during weddings.

Q 3. Name the animals that are treated as a part of temple devotees and the community.

Ans. The animals that are treated as a part of temple devotees and the community are macaques and langurs while the herds of blackbuck, nilgai and peacocks can be seen as an integral part of community in and around Rajasthan.

Very Short Answer Type Questions ↘

Q 1. What is the main reason for the depletion of flora and fauna? (CBSE 2015)

Ans. Insensitivity to our environment is the main reason for the depletion of flora and fauna.

Q 2. What is flora?

Ans. Plants of particular region or period are referred to as flora.

Q 3. What is fauna?

Ans. Species of animals of particular region or period are referred as fauna.

Q 4. Name any two states which have large percentage of reserved forests of its forest area.

Ans. Jammu and Kashmir and Andhra Pradesh are the two states, having a large percentage of reserved forests of its forest area.

Q 5. When and in which state was the program of Joint Forest Management first adopted?

Ans. The program of Joint Forest Management was first adopted in 1988 in Odisha.

Q 6. Name any two movements which were launched by local communities for the protection of forest and wildlife.

Ans. The two movements launched by local communities for the protection of forest and wildlife were Chipko Movement and Beej Bachao Andolan.

Q 7. What is enrichment plantation?

Ans. When a single commercially valuable species is extensively planted and other species is eliminated, it is called as enrichment plantation.

Q 8. In what ways the forests were harmed by the colonial government?

Ans. The forests were harmed by the colonial government for the following reasons:

- (i) For expansion of railways.
- (ii) For expansion of agricultural field.
- (iii) For expansion of mining activities.
- (iv) For expansion of commercial and scientific forestry.

Q 9. What do you know about 'Permanent forest estates'?

Ans. Reserved and protected forests are also called as 'Permanent forest estates'. These forest estates are maintained for the purpose of producing timber and other forest produce and for other protective reasons.

Q 10. How does deforestation affect ecosystem?

Ans. Deforestation affects ecosystem in the following ways:

- (i) It is responsible for climate change.
- (ii) It accelerates soil erosion and affects underground flow of water deforestation.



Short Answer Type Questions ↘

Q 1. Why is it necessary to increase the area of forest in India?

Ans. It is necessary to increase the area of forest in India due to the following reasons:

- (i) Forests play a key role in the ecological systems these are the primary producers on which all other living beings depend.
- (ii) Many forest dependent communities directly depends on them for food, drink, medicine, culture, spirituality, etc.
- (iii) Forests provide us timber.
- (iv) Forests also provide bamboo, wood for fuel, grass, charcoal, fruits, flowers, etc.

Q 2. 'The destruction of biodiversity is highly correlated with the loss of cultural diversity.' Give facts to support this statement.

Ans. The following facts support the given statement:

- (i) Such losses have increasingly marginalised and impoverished many forest dependent communities.
- (ii) Among the poor, women are affected more than men, as women bear the major responsibility of basic subsistence needs. With the depletion of these resources, the drudgery of women increased for they had to walk for more than 10 km to collect these resources which in turn, affected their health and negligence of home and children.
- (iii) The indirect impact of degradation, e.g., drought or floods etc. also hits the poor the hardest.
- (iv) Poverty is a direct outcome of environmental destruction.
- (v) Due to biological loss of forest and wildlife, many tribal communities have disappeared.

Q 3. Why do we need to conserve our biodiversity?

Ans. Conservation of biodiversity is necessary because of the following reasons:

- (i) It preserves the ecological diversity.
- (ii) It preserves our life support systems i.e., water, air and soil.
- (iii) It preserves the genetic diversity of plants and animals for better growth and breeding of species.
- (iv) Fisheries too are heavily dependent on the maintenance of aquatic biodiversity.



TIP

Here, need and importance are same, so one may write considering any of these.

Q 4. What is Joint Forest Management Programme? Which was the first state to adopt this programme?

[CBSE 2015]

Ans. A programme which involves local communities in the management and restoration of degraded forests is called Joint Forest Management Programme. It involves local communities and land managed by forest department. Its major purpose is to protect the forests from encroachments, grazing, theft and fire and also to improve the forests in accordance with an approved Joint Forest Management Plan.

This programme was first adopted in 1988 by the state of Odisha.

COMMON ERROR

Sometimes students mention the wrong state so it is advised to learn these properly.

Q 5. What has been the contribution of the Indian Wildlife Protection Act in protecting habitats in India? Explain.

Ans. The contribution of the Indian Wildlife Protection Act can be seen in the following points:

- (i) An All India list of protected species was published. The thrust of the programme was towards protecting the remaining population of certain endangered species by banning hunting, giving legal protection of their habitats and restricting trade in wildlife.
- (ii) The Central Government also announced several projects for protecting specific animals, which were greatly threatened, including the tiger, the one-horned rhinoceros, the Kashmir stag or hangul, three types of crocodiles: fresh water crocodile, saltwater crocodile and the Gharial, the Asiatic lion and others.
- (iii) Many national parks, wildlife sanctuaries and biospheres were established to protect and conserve the wildlife.

Q 6. Give a brief description about the 'Project Tiger'.

Ans. Project Tiger was launched in 1973. Initially, it showed success as the tiger population went up but in 1993, it has dropped.

The major threats to tiger population are poaching for trade, shrinking habitat, depletion of prey, growing human population. The trade of tiger skins and the use of their bones in traditional medicines especially in the Asian countries had left the tiger population on the verge of extinction. There are now 27 tiger reserves in India; Corbett National Park in Uttarakhand, Sunderbans in West Bengal, Bandhavgarh in Madhya Pradesh, Sariska in Rajasthan, Manas in Assam, etc.

Q 7. 'Conservation projects have changed their focus in the recent years.' Explain.

OR

In what ways the conservation project has changed in the recent years?

Ans. The 'conservation project has changed their focus in the recent years' in the following ways:

- (i) The conservation projects are now focusing on biodiversity rather than on a few of its components. There is now a more intensive search for different conservation measures. Increasingly, even insects are beginning to find a place in conservation planning.
- (ii) In the notification under Wildlife Act of 1980 and 1986, several hundred butterflies, moths, beetles and one dragonfly have been added to the list of protected species. In 1991, for the first time plants were also added to the list, starting with six species.
- (iii) The clear lesson from the dynamics of both environmental destruction and reconstruction in India is that local communities everywhere have to be involved in some kind of natural resource management.

Q 8. Which agency manages forests in India? Name three broad categories in which the forests are classified.

Ans. The forests in India are owned and managed by the government through the Forest Department. They are classified under the following categories:

- (i) Reserved Forests
- (ii) Protected Forests
- (iii) Unclassified Forests

Q 9. What are 'Permanent Forest Estates' and why? Which state has maximum forest cover falling under this category? Write its percentage share in the total forest area of this state.

Ans. Reserved and protected forests are referred to as the 'Permanent Forest Estates' and they are maintained for the purpose of producing timber and other forest products.

Madhya Pradesh has the largest area under permanent forests, constituting 75% of its total forest area.

Q 10. Write the major differences between reserved and protected forests.

Ans. Difference between reserved and protected forests:

S. No	Basis of Difference	Reserved forests	Protected forests
(i)	Coverage	They cover <u>more than half of the forest area.</u>	Almost <u>one third of the total forest area is protected forest.</u>
(ii)	Importance	Reserved forests are <u>most valuable from the point of view of forest and wildlife conservation.</u>	Protected forests are <u>protected from any further depletion.</u>
(iii)	States	<u>Jammu & Kashmir, Andhra Pradesh, Uttarakhand, Kerala, Tamil Nadu, West Bengal and Maharashtra.</u>	<u>Bihar, Haryana, Punjab, Himachal Pradesh, Odisha and Rajasthan.</u>

COMMON ERROR

Students do not write the difference in tabular form and forget to mention the states covering the forests.

Long Answer Type Questions

Q 1. What is biodiversity? Why is biodiversity important for human lives? Give three points.

Ans. Biodiversity denotes variety of living beings, including all types of organisms, plants and wildlife, diverse in form and functions but closely integrated in a system through multiple network of interdependencies.

Biodiversity is important for human lives because of the following reasons:

- (i) We humans along with all living organisms form a complex web of ecological systems in which we are only a part and are dependent on this system for our own existence.
- (ii) The plants, animals and microorganisms recreate:
 - (a) the quality of the air we breathe,
 - (b) the water we drink and
 - (c) the soil that produces our food without which we cannot survive.
- (iii) Forests play a key role in the ecological system as these are also the primary producers on which all other living beings depend not only for food but indirectly for many other forest produces which are used for varied purposes. So, this biodiversity maintains an ecological balance and our life support systems (air, water and soil).

Q 2. What steps have been taken by the government for the conservation of forest and wildlife in India? Explain.

OR

Write the effective practices towards conserving forests and wildlife.

Ans. The following steps have been taken by the government for the conservation of forest and wildlife in India:

- (i) **National Parks, Biosphere and Wildlife Sanctuaries:** To protect the biodiversity, the Indian government has established national parks, wildlife sanctuaries and 17 biosphere reserves.
- (ii) **The Indian Wildlife Protection Act:** The Indian Wildlife Protection Act was implemented in 1972, with various provisions for protecting habitats. An all India list of protected species was also published. The thrust of the programme was towards protecting the remaining population of certain endangered species by banning hunting, giving legal protection to their habitats and restricting trade in wildlife.
- (iii) **Projects for Protecting Specific Animals:** The Central Government has also announced several projects for protecting specific animals which were greatly threatened, including the tiger, the one-horned rhinoceros, the Kashmir stag or hangul, the three types of crocodiles the freshwater crocodile, the saltwater crocodile and the Gharial, the Asiatic lion and others.
- (iv) **Wildlife Act of 1980 and 1986:** In its notification, several hundred butterflies, moths, beetles and one dragonfly have been added to the list of protected species. In 1991, for the first time, plants were also added to the list starting with six species.
- (v) **Forest Research Institutes:** Indian government has created many forest Research Institutes for the research, protection and development of the forests. IFS Dehradun is the oldest research institution of the country.

Q 3. Assess the need for the conservation of forests and wildlife in India.

Ans. There is a need to conserve the forests and wildlife in India:

- (i) Conservation of biodiversity is necessary because it preserves the ecological diversity.
- (ii) Forests and wildlife preserve our life support systems, i.e., water, air and soil. For example, the plants, animals and microorganisms recreate the quality of the air we breathe, the water we drink and the soil that produces our food without which we cannot survive.
- (iii) It also preserves the genetic diversity of plants and animals for better growth and breeding of species. For example, in agriculture we are still dependent on traditional crop varieties.
- (iv) Fisheries too are heavily dependent on the maintenance of aquatic biodiversity.
- (v) Forests are primary producers on which all other living beings depend not only for food but indirectly for many other forest produces which are used for varied purposes.

Q 4. Write two characteristics of Joint Forest Management Programme and its two benefits for the community. Which Indian state started this programme first of all and when?

Ans. Joint Forest Management Programme involves local communities in the management and restoration of degraded forests. It was first started in Odisha in 1988. Two characteristics of Joint Forest Management Programme are:

- (i) It depends on the formation of local (village) institutions that undertake protection activities mostly on degraded forest land managed by the Forest Department.
- (ii) The local communities also work towards restoration of such degraded forests.

Two benefits of this programme for the community are:

- (i) The members of these communities are entitled to intermediary benefits like non-timber forest products.
- (ii) They are also entitled to share in the timber harvested by 'successful protection'.

Q 5. Explain the social impacts of loss of forests.

Ans. The social impacts of the loss of forests are:

- (i) **Loss of Cultural Diversity:** The loss of forest and wildlife is not just a biological issue but it is also correlated with cultural diversity. There are many forests-dependent communities, which directly depend on various components of the forests and wildlife for food, drinks, medicines, etc. Many of tribal communities like Murla Gonds, Dhurwas, Bhatras, etc., have lost their habitat because of the destruction of forests.
- (ii) **Impact on Women:** Even among the poor, women are affected more than men. In many societies, women bear the major responsibility of collection of fuel, fodder, water and other basic needs. As these resources are depleted, the drudgery of women increases. Most of the time they have to walk for more than 10 km to collect the basic necessities. This causes serious health problems for women in the negligence of home and children because of the increased hours of work, which often has serious social implications.
- (iii) **Poverty:** Deforestation is also responsible for poverty. It is considered as a direct outcome of environmental destruction. Most of the poor people or tribal people depend on forests for their basic needs. Now, if the forests are destroyed, these poor people will be deprived of the basic necessities.

COMMON ERROR

Only social impacts are to be mentioned here and not other impacts.

Q 6. Mention any four major threats to the population of tiger. Explain the efforts made by the government to protect them.

Ans. The four major threats to the population of tiger are:

- (i) Poaching for trade
- (ii) Shrinking habitat
- (iii) Depletion of prey base species
- (iv) Growing human population
- (v) The trading of tiger skins and the use of their bones in transitional medicines, especially in the Asian countries left the tiger population on the verge of extinction. (Any four)

Efforts made by the government to protect them are as under:

- (i) Project Tiger, one of the well-publicised wildlife campaigns in the world, was launched in 1973.
- (ii) There are 42 tiger reserves in India covering an area of 37,761 sq km.
- (iii) Tiger conservation had been viewed not only as an effort to save an endangered species, but with equal importance as a means of preserving biotypes of sizeable magnitude.
- (iv) Some of the tiger reserves of India are Corbett National Park in Uttarakhand, Sunderbans National Park in West Bengal etc. which were made to protect the population of tiger.

Q 7. 'Nature-worship is an old age belief'. Explain how has it helped in the conservation of forests and wildlife.

Ans. 'Nature-worship is an old age tribal belief' as it is based on the premise that all creations of nature have to be protected. Such beliefs have preserved several virgin forests in pristine form called sacred groves (the forests of God and Goddesses). These patches of forest or parts of large forests have been left untouched by the local people and any interference with them is banned.

It has helped in the conservation of forests and wildlife in the following ways:

- (i) The Mundas and the Santhal of Chota Nagpur region worship mahua (*Bassia latifolia*) and kadamba (*Anthocophalus cadamba*) trees, and the tribes of Odisha and Bihar worship the tamarind (*Tamarindus indica*) and mango (*Mangifera indica*) trees during weddings.
- (ii) Peepal and banyan trees are also considered sacred and worshipped in most parts of India.
- (iii) Sacred qualities are often ascribed to springs, mountain peaks, plants and animals which are closely protected.
- (iv) In and around Bishnoi villages in Rajasthan, herds of blackbuck (*Chinkara*), nilgai and peacocks can be seen as an integral part of the community and nobody harms them.



Chapter Test

Multiple Choice Questions

- Q 1. Which of the following states have large percentage of reserved forests of its forest area?
a. Jammu and Kashmir b. Madhya Pradesh
c. Both a. and b. d. Tamil Nadu
- Q 2. Which of the following National Park is the site dedicated to preservation of one-horned rhinoceros?
a. Bandhavgarh National Park
b. Buxa Wildlife Reserve
c. Kaziranga National Park
d. All of the above
- Q 3. In which state Bandhavgarh National Park is situated?
a. Uttarakhand b. West Bengal
c. Madhya Pradesh d. Rajasthan
- Q 4. Which one of the following was launched in 1973?
a. Project Tiger
b. Indian Wildlife Act
c. Wildlife Act
d. Indian Wildlife Protection Act
- Q 5. Which of the following trees are worshipped by the tribals of Odisha and Bihar during weddings?
a. Mahua b. Tamarind
c. Both b. and c. d. Mango

Assertion and Reason Type Questions

Directions (Q.Nos. 6-7) In the questions given below, there are two statements marked as Assertion (A) and Reason (R). Read the statements and choose the correct option:

- a. Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
b. Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).
c. Assertion (A) is true, but Reason (R) is false.
d. Assertion (A) is false, but Reason (R) is true.
- Q 6. Assertion (A): Neglect of our environment has led to the destruction and extinction of many species of animals and plant life.
Reason (R): Decreasing forest cover area is a major reason of destruction of species.
- Q 7. Assertion (A): The conservation projects focus on how to increase biodiversity that includes various conservation measures.
Reason (R): Conservation preserves the ecological diversity and our life support systems: water, air and soil.

Source Based Question

Q 8. Read the source given below and answer the questions that follows:

Reserved and protected forests are also referred to as permanent forest estates maintained for the purpose of producing timber and other forest produce, and for protective reasons. Madhya Pradesh has the largest area under permanent forests, constituting 75 per cent of its total forest area. Jammu and Kashmir, Andhra Pradesh, Uttarakhand, Kerala, Tamil Nadu, West Bengal, and Maharashtra have large percentages of reserved forests of its total forest area whereas Bihar, Haryana, Punjab, Himachal Pradesh, Odisha and Rajasthan have a bulk of it under protected forests. All North-Eastern states and parts of Gujarat have a very high percentage of their forests as unclassified forests managed by local communities.

- (i) Which state has the largest area under permanent forests and how much?
(ii) What are permanent forest estates? Why are they maintained?
(iii) Name the states having the large percentages of reserved forests of its total forest area.

Very Short Answer Type Questions

- Q 9. What are the main objectives of Joint Forest Management Programme?
Q 10. Which community in India is famous for protecting the blackbuck?
Q 11. What are unclassified forests?
Q 12. What are the factors responsible for depletion of forest and wildlife?

Short Answer Type Questions

- Q 13. How does biological loss of forest and wildlife resources correlate with loss of cultural diversity?
Q 14. What is Project Tiger? When was it launched? Mention any four tiger reserves of India?
Q 15. List the provisions made by 'The Indian Wildlife (Protection) Act, 1972' for protecting habitats.
Q 16. 'Conservation projects have changed their focus in the recent years'. Explain?

Long Answer Type Questions

- Q 17. Describe how communities have conserved and protected forests and wildlife in India.
Q 18. Why is conservation of forests and wildlife necessary? In what way have conservation projects changed in the recent years?