

UNITE

UNITE 1

Q1. Define Environment. Explain Biotic and Abiotic Components. (5 Marks)

Definition of Environment

Environment is the surroundings in which living organisms exist and interact with each other and with non-living things.

Components of Environment

1. Biotic Components (Living Components)

Biotic components are all living organisms present in the environment.

Examples:

- Plants (Producers)
- Animals (Consumers)

Types: Bacteria and Fungi (Decomposers)

- **Producers:** Green plants
- **Consumers:** Humans, animals
- **Decomposers:** Bacteria, fungi

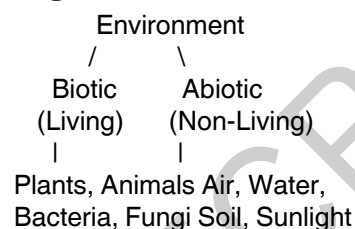
2. Abiotic Components (Non-Living Components)

Abiotic components are the physical and chemical factors of the environment.

Examples:

- Air
- Water
- Soil
- Sunlight
- Temperature
- Minerals

Diagram



Q2. Explain Scope and Importance of Environmental Studies. (5 Marks)

Scope of Environmental Studies

Environmental Studies deals with the study of the environment and its relationship with living organisms.

Scope:

- 1 Study of natural resources (water, forest, minerals, energy).
- 2 Study of ecosystems and ecological balance.
- 3 Conservation of biodiversity.
- 4 Control of environmental pollution.
- 5 Sustainable development and resource management.
- 6 Environmental laws and public awareness.

Importance of Environmental Studies

1. Creates awareness about environmental problems.

1

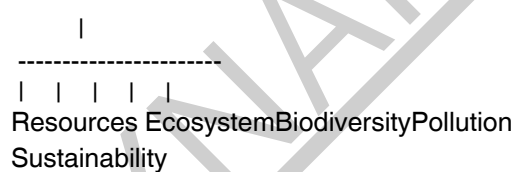
- 2 Helps in conservation of natural resources.
- 3 Protects biodiversity and ecosystems.
- 4 Reduces pollution and promotes a healthy environment.
- 5 Supports sustainable development.
- 6 Improves quality of life for present and future generations.

Conclusion

Environmental Studies helps us understand environmental issues and encourages the conservation of natural resources for sustainable development.

Short Diagram

Environmental Studies



Q.3 What is Sustainable Development? Explain its Principles. (5 Marks)

Definition

Sustainable Development is development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs.

Principles of Sustainable Development

1. Conservation of Natural Resources

Natural resources should be used wisely and conserved for future generations.

2. Intergenerational Equity

Resources should be preserved so that future generations can also benefit from them.

3. Sustainable Use of Resources

Resources should be utilized efficiently without overexploitation.

4. Environmental Protection

Development activities should minimize pollution and environmental degradation.

5. Biodiversity Conservation

Plants, animals, and ecosystems should be protected and maintained.

6. Public Participation

People should actively participate in environmental decision-making.

Diagram



Q.4 Explain Structure and Functions of an Ecosystem. (5 Marks)

Definition

An **ecosystem** is a functional unit of nature where living organisms (biotic components) interact with non-living components (abiotic components).

Structure of Ecosystem

1. Abiotic Components (Non-Living)

- Air
- Water
- Soil
- Sunlight
- Temperature
- Minerals

2. Biotic Components (Living)

a) Producers

- Green plants
- Prepare food by photosynthesis

b) Consumers

- Herbivores, Carnivores, Omnivores
- Depend on producers for food

c) Decomposers •

- Bacteria and fungi
- Break down dead organisms into simple substances

Functions of Ecosystem

1. Productivity

Plants produce food using sunlight.

2. Energy Flow

Energy flows from Sun → Producers → Consumers → Decomposers.

3. Nutrient Cycling

Recycling of nutrients between living and non-living components.

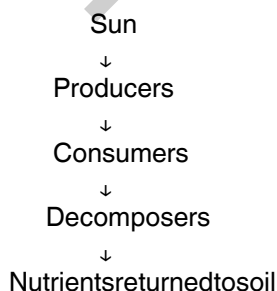
4. Decomposition

Dead plants and animals are decomposed by microorganisms.

5. Ecological Balance

Maintains balance among organisms and environment.

Diagram



Q.5 Differentiate between Food Chain and Food Web. (5 Marks)

Food Chain	Food Web
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A single pathway of energy flow.	A network of interconnected food chains.
Simple and linear.	Complex and interconnected.
One organism depends on another in sequence.	Organisms have multiple food sources.
Less stable.	More stable.
Disturbance affects the entire chain.	Disturbance has less effect due to alternatives.

Food Chain

A **Food Chain** is a linear sequence through which energy passes from one organism to another.

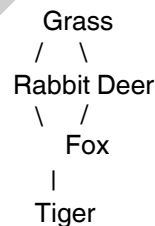
Example:

Grass → Deer → Tiger

Food Web

A **Food Web** is a network of interconnected food chains in an ecosystem.

Example:



Q.6 Explain Ecological Pyramids with Diagram. (5 Marks)

Definition

An **Ecological Pyramid** is a graphical representation of the relationship between different trophic levels in an ecosystem.

It shows the number, biomass, or energy of organisms at each trophic level.

Types of Ecological Pyramids

1. Pyramid of Numbers

Shows the number of organisms at each trophic level.

Example:

Grass → Rabbit → Fox

2. Pyramid of Biomass

Shows the total biomass (living matter) present at each trophic level.

Unit: g/m² or kg/m²

3. Pyramid of Energy

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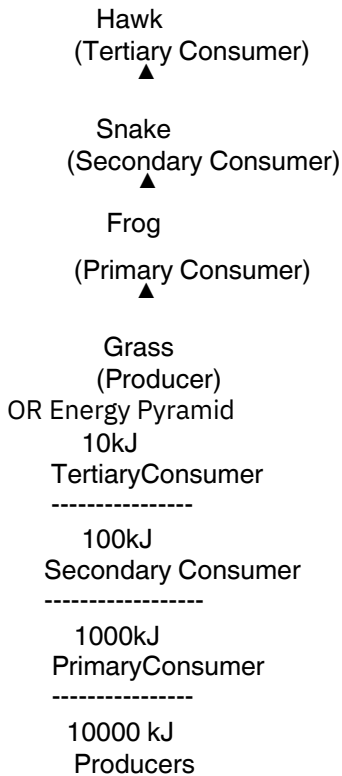
3

Shows the flow of energy through different trophic levels.

Unit: kJ/m²/year

Energy decreases from lower to higher trophic levels due to the **10% Law**.

Diagram



Importance

- Shows energy transfer in ecosystem.
- Explains trophic levels.
- Helps understand ecological balance.

Q.7 Explain Ecological Succession. (5 Marks)

Definition

Ecological Succession is the gradual and natural process of change in the species composition of an ecosystem over time, leading to a stable community called the **climax community**.

Stages of Ecological Succession

1. Nudation

Formation of a bare area due to natural causes like volcanic eruption, flood, fire, etc.

2. Invasion

Pioneer species enter and establish themselves in the bare area.

3. Competition and Co-action

Different species compete for food, water, light, and space.

4. Reaction

Organisms modify the environment, making it suitable for other species.

5. Stabilization (Climax Community)

A stable and self-sustaining community is formed.

Types of Ecological Succession

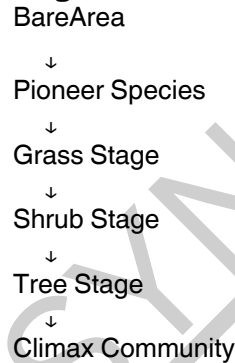
1. Primary Succession

- Starts on a barren land where no life existed before.
- Example: Newly formed volcanic rock.

2. Secondary Succession

- Starts in an area where life existed previously but was disturbed.
- Example: Forest regeneration after fire.

Diagram



Importance

- Helps in ecosystem development.
- Increases biodiversity.
- Maintains ecological balance.
- Leads to a stable ecosystem.

Q.8 Explain Energy Flow in an Ecosystem. (5 Marks)

Definition

Energy Flow is the movement of energy through different trophic levels of an ecosystem, from producers to consumers and finally to decomposers.

The main source of energy is the **Sun**.

Flow of Energy

1. Sun

- Primary source of energy.

2. Producers

- Green plants capture solar energy through photosynthesis and convert it into chemical energy.

3. Primary Consumers

- Herbivores obtain energy by eating plants.

4. Secondary Consumers

- Carnivores obtain energy by eating herbivores.

5. Tertiary Consumers

- Top carnivores obtain energy from lower consumers.

6. Decomposers

- Bacteria and fungi decompose dead organisms and recycle nutrients.

UNITE

Diagram

Sun



Producers (Plants)



Primary Consumers (Herbivores)



Secondary Consumers (Carnivores)



Tertiary Consumers



Decomposers

10% Law of Energy Flow

According to **Lindeman's 10% Law**:

- Only **10% of energy** is transferred to the next trophic level. Remaining **90% is lost** as heat and metabolic activities.

Example

Producers = 10000 kJ

Primary Consumer = 1000 kJ

Secondary Consumer = 100 kJ

Tertiary Consumer = 10 kJ

Importance

1. Maintains ecosystem balance.
 2. Explains food chains and food webs.
 3. Helps understand productivity of ecosystems.
- 41111

Q9 Ecosystem Case Studies SPPU me direct 5 marks ke liye bahut important hain.

1. Forest Ecosystem (5 Marks)

Definition

A **Forest Ecosystem** is a natural ecosystem dominated by trees and other vegetation.

Components

Abiotic Components

- Soil
- Water
- Sunlight
- Temperature

Biotic Components

- Producers: Trees, shrubs, grass
- Consumers: Deer, rabbit, tiger
- Decomposers: Bacteria, fungi

Food Chain

Trees → Deer → Tiger

Importance

1. Maintains ecological balance.
2. Prevents soil erosion.
3. Absorbs CO₂ and releases O₂.
4. Conserves biodiversity.

2. Grassland Ecosystem (5 Marks)

Definition

An ecosystem dominated by grasses with few trees is called a **Grassland Ecosystem**.

Components

Abiotic Components

- Soil
- Sunlight
- Rainfall

Biotic Components

- Producers: Grass
- Consumers: Rabbit, Deer, Cow
- Carnivores: Fox, Lion
- Decomposers: Bacteria, Fungi

Food Chain

Grass → Rabbit → Fox

Importance

1. Provides food for herbivores.
2. Supports biodiversity.
3. Prevents soil erosion.

3. Desert Ecosystem (5 Marks)

Definition

A **Desert Ecosystem** is characterized by very low rainfall and extreme temperatures.

Components

Abiotic Components

Sand
High temperature
Low rainfall

Biotic Components

- Producers: Cactus, desert shrubs
- Consumers: Camel, lizard
- Carnivores: Snake, eagle
- Decomposers: Bacteria

Food Chain

Cactus → Insect → Lizard → Snake

Importance

1. Supports specially adapted organisms.
2. Maintains ecological balance.
3. Conserves unique biodiversity.

4. Aquatic Ecosystem (5 Marks)

Definition

An ecosystem found in water bodies such as ponds, lakes, rivers, and oceans.

Components

Abiotic Components

- Water
- Sunlight
- Dissolved oxygen
- Temperature

Biotic Components

- Producers: Phytoplankton, aquatic plants
- Consumers: Fish, insects
- Decomposers: Bacteria, fungi

Food Chain

Phytoplankton → Small Fish → Large Fish

Importance

1. Maintains water quality.
2. Provides habitat for aquatic organisms.
3. Supports biodiversity.

UNITE 2**Q1. Define Soil Erosion. Explain its Types, Causes and Control Measures. (5 Marks)****Definition**

Soil Erosion is the removal of the top fertile layer of soil by natural agents such as water and wind.

Types of Soil Erosion**1. Water Erosion**

Removal of soil by flowing water, rainfall, rivers, and floods.

2. Wind Erosion

Removal of soil by strong winds, especially in dry and desert regions.

Causes of Soil Erosion

1. Deforestation
2. Overgrazing
3. Heavy rainfall and floods
4. Mining activities
5. Improper agricultural practices
6. Construction and urbanization

Control Measures

1. Afforestation (planting trees)
2. Contour ploughing
3. Terrace farming
4. Controlled grazing
5. Construction of check dams
6. Shelter belts/windbreaks to reduce wind speed

Diagram

Causes of Soil Erosion

↓
Deforestation, Overgrazing,
Mining, Heavy Rainfall

↓
Soil Erosion

↓
Control Measures
(Afforestation, Terrace Farming,
Check Dams, Contour Ploughing)

Q2. What is Land Degradation? Explain Causes, Impacts and Remedial Measures. (5 Marks)**Definition**

Land Degradation is the deterioration in the quality and productivity of land due to natural or human activities, making it less useful for agriculture and other purposes.

Causes of Land Degradation

1. Deforestation
2. Soil erosion
3. Mining activities

4. Overgrazing
5. Urbanization and industrialization
6. Excessive use of fertilizers and pesticides

Impacts of Land Degradation

1. Loss of soil fertility
2. Reduced agricultural productivity
3. Loss of biodiversity
4. Desertification
5. Increased soil erosion
6. Environmental imbalance

Remedial Measures

1. Afforestation and reforestation
2. Soil conservation techniques
3. Controlled grazing
4. Sustainable agricultural practices
5. Proper waste management
6. Reclamation of degraded land

Diagram

Deforestation / Mining / Overgrazing

↓
Land Degradation

↓
Loss of Fertility & Biodiversity

↓
Afforestation & Conservation

Q3. Discuss Impacts of Mining on Forests and Biodiversity. (5 Marks)**Definition**

Mining is the extraction of minerals and other resources from the earth.

Impacts on Forests

1. Deforestation due to clearing of land.
2. Loss of forest cover and vegetation.
3. Soil erosion and land degradation.
4. Water pollution from mining waste.
5. Disturbance of ecological balance.

Impacts on Biodiversity

1. Destruction of wildlife habitats.
2. Reduction in plant and animal species.
3. Loss of biodiversity.
4. Disturbance in food chains and food webs.
5. Increased risk of species extinction.

Control Measures

1. Afforestation and reforestation.
2. Sustainable mining practices.
3. Rehabilitation of mined areas.
4. Proper waste management.

Q5. What are Water Conflicts? Explain Different Types of Water Conflicts in India. (5 Marks)

Definition

Water Conflicts are disputes arising due to unequal distribution, shortage, or excessive use of water resources.

Types of Water Conflicts in India

1. Inter-State Water Conflicts

Disputes between states over river water sharing.

Example: Cauvery River dispute (Karnataka–Tamil Nadu).

2. International Water Conflicts

Disputes between countries sharing rivers.

Example: Indus Water Treaty (India–Pakistan).

3. Local Water Conflicts

Conflicts among villages, farmers, industries, and urban areas.

4. Urban-Rural Water Conflicts

Competition for water between cities and nearby villages.

Effects

1. Water scarcity.
2. Agricultural losses.
3. Social and political tensions.
4. Environmental degradation.

Conclusion

Proper water management and cooperation are necessary to reduce water conflicts.

Q7. Differentiate Renewable and Non-Renewable Energy Resources. (5 Marks)

Renewable Energy Resources	Non-Renewable Energy Resources
Can be replenished naturally.	Cannot be replenished quickly.
Available continuously.	Limited in quantity.
Cause less pollution.	Cause more pollution.
Sustainable for future use.	May get exhausted.

Examples: Solar, Wind, Hydro.

Examples: Coal, Petroleum, Natural Gas.

Explain Renewable and Non-Renewable Resources (5 Marks)

Definition

Natural Resources are resources obtained from nature and used by humans for their needs. Based on availability, natural resources are classified into **Renewable** and **Non-Renewable Resources**.

1. Renewable Resources

Resources that can be naturally replenished or renewed within a short period of time are called **Renewable Resources**.

Examples:

- Solar Energy
- Wind Energy
- Water
- Forests
- Biomass

Advantages:

1. Environment-friendly.
2. Available continuously.
3. Reduce pollution.
4. Sustainable for future generations.

2. Non-Renewable Resources

Resources that cannot be replenished quickly and take millions of years to form are called **Non-Renewable Resources**.

Examples:

- Coal
- Petroleum
- Natural Gas
- Minerals

Disadvantages:

1. Limited availability.
2. Cause environmental pollution.
3. May get exhausted in the future.

Q8. Explain Groundwater Depletion and its Environmental Consequences. (5 Marks)

Definition

Groundwater Depletion is the excessive extraction of groundwater beyond its natural recharge rate.

Causes

1. Over-extraction for agriculture.
2. Rapid population growth.
3. Industrial use.
4. Urbanization.
5. Reduced rainfall.

Environmental Consequences

1. Lowering of water table.
2. Drying of wells and borewells.
3. Reduced water availability.

4. Land subsidence (sinking of land).
5. Loss of wetlands and aquatic ecosystems.
6. Saltwater intrusion in coastal areas.

Control Measures

1. Rainwater harvesting.
2. Artificial groundwater recharge.
3. Efficient irrigation methods.
4. Water conservation practices.
5. Sustainable groundwater management.

Diagram

Excessive Pumping

↓

Groundwater Depletion

↓

Lower Water Table

↓

Water Scarcity & Ecosystem Damage

Conclusion

Groundwater depletion is a serious environmental issue that can be controlled through conservation and sustainable water management.



Q4.Explain EnvironmentalImpacts of Large Dam Projects on Forests and Biodiversity. (5 Marks)

Definition

Large dams are constructed for irrigation, hydroelectric power generation, and water storage.

Environmental Impacts

On Forests

- 1 Submergence of forest areas.
- . Large-scale deforestation.
- 2 Soil erosion and land degradation.
- . Loss of valuable forest resources.

On Biodiversity

- 1 Destruction of wildlife habitats.
- 4 Migration and displacement of animals.
- 2 Reduction in plant and animal species.
- . Disturbance of ecological balance.
- 3 Loss of biodiversity.

Social Impact

- 4 Displacement of local communities and tribal people.

Example

Narmada Dam Project – Forest loss and displacement of people.

Conclusion

Large dams provide benefits but also cause serious environmental damage to forests and biodiversity.

Q6. Explain Overuse of Surface Water Resources. (5 Marks)

Definition

Surface Water Resources include rivers, lakes, ponds, reservoirs, and streams.

Overuse of Surface Water means excessive withdrawal of water beyond its natural replenishment capacity.

Causes

1. Rapid population growth.
2. Excessive irrigation.
3. Industrial use.
4. Urbanization.
5. Wastage of water.

Effects

- 1 Drying of rivers and lakes.
- . Water scarcity.
- 2 Loss of aquatic life.
- . Reduced groundwater recharge.
- 3 Ecological imbalance.

Control Measures

- 4 Water conservation.
- . Rainwater harvesting.
- 2 Efficient irrigation methods.
- . Recycling and reuse of water.
- 3 Sustainable water management.

Conclusion

Proper management of surface water resources is essential for sustainable development.

Q9. Explain the Basics of Air Circulation and Precipitation. (5 Marks)

Air Circulation

Definition

Air Circulation is the continuous movement of air in the atmosphere due to differences in temperature and pressure.

Process

- 1 Sun heats the Earth's surface.
- . Warm air rises.
- 2 Cool air moves to replace it.
- . This creates wind and atmospheric circulation.
- 3

Precipitation

Definition

Precipitation is any form of water falling from the atmosphere to the Earth's surface.

Types of Precipitation

1. Rain
2. Snow
3. Hail
4. Sleet

Process

- 1 Evaporation of water.
- . Condensation into clouds.
- 2 Clouds become heavy.
- . Water falls as precipitation.

Diagram

4

↓
Evaporation
↓
Condensation
↓
Cloud Formation
↓

Precipitation (Rain/Snow/Hail)

Q. Explain Impacts of Mining on Environment. (5 Marks)

Definition

Mining is the process of extracting minerals and other valuable resources from the earth.

Impacts of Mining on Environment

1. Deforestation

Large forest areas are cleared for mining activities, leading to loss of vegetation.

2. Land Degradation

Mining removes the topsoil and damages the land, making it unsuitable for agriculture.

3. Soil Erosion

Removal of vegetation increases soil erosion by wind and water.

4. Water Pollution

Mining waste and chemicals contaminate rivers, lakes, and groundwater.

5. Air Pollution

Dust and harmful gases released during mining pollute the atmosphere.

6. Loss of Biodiversity

Mining destroys habitats of plants and animals, reducing biodiversity.

7. Noise Pollution

Heavy machinery and blasting operations create excessive noise.

8. Health Problems

Air and water pollution from mining can cause respiratory and other health issues.

Control Measures

- 1 Afforestation and reforestation.
- . Sustainable mining practices.
- 2 Proper disposal of mining waste.
- . Land reclamation after mining.
- 3 Pollution control measures.
- .

Diagram

Mining Activities

↓
Deforestation
Land Degradation
Water Pollution
Air Pollution
Loss of Biodiversity

↓
Environmental Damage

Case Study: Rainwater Harvesting in Tamil Nadu (5 Marks)

Introduction

Tamil Nadu is one of the first states in India to make **Rainwater Harvesting (RWH)** compulsory to address water scarcity.

Measures Taken

- 1 Mandatory Rainwater Harvesting in all buildings (2003).
- . Construction of recharge pits and wells.
- 2 Rooftop rainwater collection systems.
- . Public awareness campaigns.

Benefits

- 1 Increased groundwater level.
- 4 Reduced water scarcity.
- . Improved water quality.
- 2 Reduced dependence on external water sources.
- 3 Sustainable water management.
- .

Conclusion

Tamil Nadu's Rainwater Harvesting program is a successful example of water conservation and groundwater recharge.

Diagram

Rainwater

↓
Rooftop Collection

↓
Storage Tank / Recharge Pit

↓
Groundwater Recharge

Case Study: Narmada Bachao Andolan (5 Marks)

Introduction

Narmada Bachao Andolan (NBA) is a social movement started in 1985 to oppose large dam projects on the Narmada River.

Leader

- Medha Patkar

Objectives

- 1 Protect the environment.
- . Prevent displacement of local people.
- 2 Ensure proper rehabilitation of affected families.
- . Raise awareness about social and environmental impacts of dams.
- 3

Issues Raised

- 4 Submergence of forests.
- . Loss of biodiversity.
- 2 Displacement of tribal communities.
- . Environmental degradation.

Outcomes

- 1 Increased public awareness.
- 4 Rehabilitation policies for affected people.
- . Environmental impact assessments gained importance.
- 2
- 3
- .

Q1. Define Biodiversity and Explain its Levels. (5 Marks)

Definition

Biodiversity refers to the variety of living organisms present on Earth, including plants, animals, and microorganisms.

Levels of Biodiversity

1. Genetic Diversity

Variation in genes within the same species.

Example: Different varieties of rice, wheat, mango.

2. Species Diversity

Variety of different species present in a region.

Example: Tiger, deer, elephant, birds in a forest.

3. Ecosystem Diversity

Variety of ecosystems in a geographical area.

Example: Forests, deserts, grasslands, wetlands.

Conclusion

Biodiversity is essential for ecological balance and sustainable development.

Q2. Explain Genetic, Species and Ecosystem Diversity. (5 Marks)

Genetic Diversity

Variation of genes among individuals of the same species.

Example: Different breeds of dogs.

Species Diversity

Variety of different species in an ecosystem.

Example: Different plants and animals in a forest.

Ecosystem Diversity

Variety of ecosystems in a region.

Example: Forest, desert, grassland, aquatic ecosystem.

Importance

1. Maintains ecological balance.
2. Increases adaptability.
3. Supports ecosystem stability.

Q3. Explain Biodiversity Hotspots of India. (5 Marks)

Definition

A **Biodiversity Hotspot** is a region with high biodiversity and many endemic species that is under threat.

Biodiversity Hotspots in India

1. Western Ghats
2. Himalayas
3. Indo-Burma Region
4. Sundaland (Nicobar Islands)

Importance

1. Rich biodiversity.
2. Conservation priority areas.
3. Protect endangered species.

Conclusion

Biodiversity hotspots are important for conserving unique plants and animals.

Q4. Explain Values of Biodiversity. (5 Marks)

1. Consumptive Value

Direct use such as food, fuel, medicines.

2. Productive Value

Commercial products like timber, silk, wool.

3. Social Value

Cultural and religious importance.

4. Ethical Value

Every species has the right to exist.

5. Aesthetic Value

Beauty and recreation.

6. Ecological Value

Maintains ecosystem stability.

Conclusion

Biodiversity provides economic, ecological, and social benefits.

Q5. What are Threats to Biodiversity? (5 Marks)

Definition

Threats to biodiversity are factors that reduce the variety of living organisms.

Major Threats

1. Habitat destruction
2. Deforestation
3. Poaching
4. Pollution
5. Climate change
6. Invasive species
7. Overexploitation of resources

Conclusion

Conservation measures are necessary to protect biodiversity.

Q6. Explain Habitat Loss and Poaching. (5 Marks)

Habitat Loss

Destruction of natural habitats due to deforestation, urbanization, mining, etc.

Effects

1. Loss of biodiversity
2. Species extinction
3. Ecological imbalance

Poaching

Illegal hunting, capturing, or killing of wild animals.

Effects

1. Reduction in wildlife population
2. Extinction of endangered species
3. Disturbance of food chains

Conclusion

Habitat loss and poaching are major causes of biodiversity decline.

Q7. Explain In-situ Conservation. (5 Marks)

Definition

In-situ Conservation means conserving species in their natural habitats.

Examples

- National Parks

- Wildlife Sanctuaries
- Biosphere Reserves

Advantages

1. Natural protection of species.
2. Maintains ecosystem balance.
3. Conserves genetic diversity.

Example

Jim Corbett National Park

Q8. Explain Ex-situ Conservation. (5 Marks)

Definition

Ex-situ Conservation means conserving species outside their natural habitats.

Examples

- Zoos
- Botanical Gardens
- Seed Banks
- Gene Banks

Advantages

1. Protection of endangered species.
2. Controlled breeding programs.
3. Preservation of genetic material.

Example

National Botanical Research Institute

Q9. Differentiate Between In-situ and Ex-situ Conservation. (5 Marks)

In-situ Conservation	Ex-situ Conservation
Conservation in natural habitat.	Conservation outside natural habitat.
Protects entire ecosystem.	Protects selected species.
Natural breeding occurs.	Artificial breeding may occur.
Less expensive.	More expensive.
Example: National Park.	Example: Zoo, Seed Bank.

Case Study: Project Tiger (5 Marks)**Introduction**

Project Tiger was launched by the Government of India in **1973** to protect tigers and their habitats.

Objectives

- 1 Protect tiger population.
- . Conserve biodiversity.
- 2 Prevent poaching.

Achievements

- 1 Increase in tiger population.
- . Creation of tiger reserves.
- 2 Better wildlife conservation.

Conclusion

Project Tiger is one of India's most successful wildlife conservation programs.

Case Study: Human-Animal Conflict in Sundarbans (5 Marks)**Introduction**

The Sundarbans is a mangrove ecosystem famous for the Royal Bengal Tiger.

Causes of Conflict

- 1 Human encroachment into forests.
- . Loss of wildlife habitat.
- 2 Scarcity of food for animals.

Effects

- 1 Injury and death of humans.
- . Harm to wildlife.
- 2 Economic losses.

Solutions

- 1 Habitat conservation.
- . Awareness programs.
- 2 Compensation schemes.
- . Better forest management.

Conclusion

Human-animal conflict can be reduced through conservation and sustainable coexistence.