



Assignment - 3

Q) Define Biodiversity and briefly explain the types of biodiversity?

Ans:- Biodiversity refers to the variety and variability of life forms within a particular habitat, ecosystem or Earth as a whole. It encompasses the full range of life, from individual organisms to species and ecosystems and it plays a crucial role in maintaining ecological balance, ecosystem services and the overall health of our planet.

Types of biodiversity

- 1) Genetic :- It refers to the variation in the genetic makeup among individuals within a species or population.
- 2) Species :- It refers to the variety of species present in ecosystem.
- 3) Ecosystem :- It refers to the variety of ecosystem found in region on the earth.

Q) Explain in detail 4 values of biodiversity.

Ans: Four values of biodiversity are as follows.

1) Ecological Value

Biodiversity plays a key role in maintaining ecological balance and the functioning of ecosystems.

- Ecosystem Services: - Biodiversity ensures the provision of vital services such as air and water purification, soil fertility, climate regulation.

2) Economic Value

Biodiversity is a cornerstone of many industries and livelihoods.

- Agriculture: - Diverse genetic resources in plants and animals ensure food security.

3) Cultural and Aesthetic Value

→ Biodiversity enriches cultures and human experiences.

- Spiritual and Religious Significance.
- Aesthetic Enjoyment.



Oriental Institute Of Science And Technology
Bhopal

Roll No.....Scholar No.....

Q) Define the hotspots of biodiversity. Explain the factors determining the hotspots.

Ans:- Biodiversity hotspots are regions that are both rich in species diversity and significantly threatened by human activities. These areas are crucial for conservation due to their ecological, cultural & economic importance.

Factors determining the hotspots -

1. Species Richness
2. Endemism
3. Habitat loss
4. Climatic conditions
5. Geographic Isolation
6. Evolutionary history
7. Human Activities
8. Ecosystem services

Q) Explain in details the threats and conservation of biodiversity?

Ans: - Threats to Biodiversity

- 1) ~~Part 1~~ Habitat destruction & fragmentation
- 2) Climate change
- 3) Pollution
- 4) overexploitation
- 5) Invasive species
- 6) Disease
- 7) Population growth and overconsumption.

conservation of Biodiversity

- 1) In situ conservation
- 2) Restoration Ecology
- 3) Ex situ conservation
- 4) Convention on Biological Diversity
- 5) Awareness and education
- 6) Sustainable practices
- 7) Research and monitoring
- 8) Policy and legislation.