FAQ's

Discuss the two important Eco zones/ realms in India.

Himalayas

The Himalayas consist of the youngest and loftiest mountain chains in the world. The Himalayas have attained a unique personality owing to their high altitude, steep gradient and rich temperate flora.

The forests are very dense with extensive growth of grass and evergreen tall trees. Oak, chestnut, conifer, ash, pine, deodar are abundant in Himalayas. There is no vegetation above the snowline. Several interesting animals live in the Himalayan ranges. Chief species include wild sheep, mountain goats, ibex, shrew, and tapir. Panda and snow leopard are also found here.

Semi-Arid Areas

Adjoining the desert are the semi-arid areas, a transitional zone between the desert and the denser forests of the Western Ghats. The natural vegetation is thorn forest. This region is characterized by discontinuous vegetation cover with open areas of bare soil and soil-water deficit throughout the year.

Thorny scrubs, grasses and some bamboos are present in some regions. A few species of xerophytic herbs and some ephemeral herbs are found in this semi-arid tract. Birds, jackals, leopards, eagles, snakes, fox, buffaloes are found in this region.

What is conservation of biodiversity?

Conservation biology matured in the mid-20th century as ecologists, naturalists and other scientists began to research and address issues pertaining to global biodiversity declines.

The conservation ethic advocates management of natural resources for the purpose of sustaining biodiversity in species, ecosystems, the evolutionary process and human culture and society.

Conservation biology is reforming around strategic plans to protect biodiversity. Preserving global biodiversity is a priority in strategic conservation plans that are designed to engage public policy and concerns affecting local, regional and global scales of communities, ecosystems and cultures.Action plans identify ways of sustaining human well-being, employing natural capital, market capital and ecosystem services

Removal of exotic species will allow the species that they have negatively impacted to recover their ecological niches. Exotic species that have become pests can be identified taxonomically (e.g., with Digital Automated Identification SYstem (DAISY), using the barcode of life). Removal is practical only given large groups of individuals due to the economic cost.

As sustainable populations of the remaining native species in an area become assured, "missing" species that are candidates for reintroduction can be identified using databases such as the *Encyclopedia of Life* and the Global Biodiversity Information Facility.

- Biodiversity banking places a monetary value on biodiversity. One example is the Australian Native Vegetation Management Framework.
- Gene banks are collections of specimens and genetic material. Some banks intend to reintroduce banked species to the ecosystem (e.g., via tree nurseries).
- Reduction of and better targeting of pesticides allows more species to survive in agricultural and urbanized areas.
- Location-specific approaches may be less useful for protecting migratory species. One approach is to create wildlife corridors that correspond to the

animals' movements. National and other boundaries can complicate corridor creation.

Discuss the differences between in-situ and ex-situ type of conservation.

In situ Conservation:

1. It is conservation of endangered species in their natural habitats.
2. The endangered species are protected from predators.
3. The depleting resources are augmented.
4. The population recovers in natural environment.

Ex situ Conservation:

1. It is conservation of endangered species outside their natural habitats.
2. The endangered species are protected from all adverse factors.
3. They are kept under human supervision and provided all the essentials.
4. Offspring produced in captive breeding are released in natural habitat for acclimatization.

Why is it important to conserve biodiversity?

Biodiversity has a number of functions on the Earth. These are as follows:

- **Maintaining balance of the ecosystem:** Recycling and storage of nutrients, combating pollution, and stabilizing climate, protecting water resources, forming and protecting soil and maintaining ecobalance.
- **Provision of biological resources:** Provision of medicines and pharmaceuticals, food for the human

population and animals, ornamental plants, wood products, breeding stock and diversity of species, ecosystems and genes.

- **Social benefits:** Recreation and tourism, cultural value and education and research.

The role of biodiversity in the following areas will help make clear the importance of biodiversity in human life:

- **Biodiversity and food:** 80% of human food supply comes from 20 kinds of plants. But humans use 40,000 species for food, clothing and shelter. Biodiversity provides for variety of foods for the planet.
- **Biodiversity and human health:** The shortage of drinking water is expected to create a major global crisis. Biodiversity also plays an important role in drug discovery and medicinal resources. Medicines from nature account for usage by 80% of the world's population.
- **Biodiversity and industry:** Biological sources provide many industrial materials. These include fiber, oil, dyes, rubber, water, timber, paper and food.
- **Biodiversity and culture:** Biodiversity enhances recreational activities like bird watching, fishing, trekking etc. It inspires musicians and artists.