FAQ's

1. What are basic types of natural resources?

On the basis of origin, natural resources may be divided into:

Biotic — Biotic resources are obtained from the biosphere (living and organic material), such as forests and animals, and the materials that can be obtained from them. Fossil fuels such as coal and petroleum are also included in this category because they are formed from decayed organic matter.

Abiotic – Abiotic resources are those that come from non-living, non-organic material. Examples of abiotic resources include land, fresh water, air and heavy metals including ores such as gold, iron, copper, silver, etc.

Natural resources can also be categorized based on their stage of development including:

Potential resources: these are resources that exist in a region and may be used in the future. For example, if a country has petroleum in sedimentary rocks, it is a potential resource until it is actually drilled out of the rock and put to use.

Actual resources: these are resources that have been surveyed, their quantity and quality has been determined, and they are currently being used. The development of actual resources is dependent on technology.

Reserve resources: this is the part of an actual resource that can be developed profitably in the future.

Stock resources: these are resources that have been surveyed, but cannot be used due a lack of technology. An example of a stock resource is hydrogen.

Natural resources are also classified based on their renewability:

Renewable natural resources: these are resources that can be replenished. Examples of renewable resources include sunlight, air, and wind . They are available continuously and their quantity is not noticeably affected by human consumption. However, renewable resources do not have a rapid recovery rate and are susceptible to depletion if they are overused.

Non-renewable natural resources: these resources form extremely slow and do not naturally form in the environment. A resource is considered to be non-renewable when their rate of consumption exceeds the rate of recovery. Examples of non-renewable natural resources are minerals and fossil fuels.

2. **Discuss the different layers present in the forest.**
A forest is made up of many layers. Starting from the ground level and moving up, the main layers of all forest types are the forest floor, the understory and the canopy. The emergent layer exists in tropical rainforests. Each layer has a different set of plants and animals depending upon the availability of sunlight, moisture and food.

Forest floor contains decomposing leaves, animal droppings, and dead trees. All of decay on the forest floor and form the new soil and provides nutrients to the plants. The forest floor supports ferns, grasses, mushroom and trees seedlings.

Understory is made up of bushes, shrubs, and young trees that are adapted to living in the shades of the canopy.

Canopy is formed by the mass of intertwined branches, twigs and leaves of the mature trees. The crowns of the dominant trees receive most of the sunlight. This is the most productive part of the trees where maximum food

is produced. The canopy forms a shady, protective "umbrella" over the rest of the forest.

Emergent layer exists in the tropical rain forest and is composed of a few scattered trees that tower over the canopy

3. What is a forest?

A **forest** is a large area of land covered with trees or other woody vegetation. Hundreds of more precise definitions of forest are used throughout the world, incorporating factors such as tree density, tree height, land use, legal standing and ecological function. According to the widely used United Nations Food and Agriculture Organization definition, forests covered four billion hectares (15 million square miles) or approximately 30 percent of the world's land area in 2006.

4. Discuss any 2 types of forests in India.

Tropical forest:

A great majority of the forests found in India are of this type. Tropical forests are of two types:

(A) Tropical moist forests.

(B) Tropical dry forests.

A. Tropical moist forests:

These are further classified into the following types on the basis of relative degree of wetness:

(i) Tropical moist evergreen forests,

(i) Tropical moist semi-evergreen forests, and

(ii) Tropical moist deciduous forests.

(iii) Littoral and swamp forests.

(i) Tropical moist evergreen forests:

These are also called tropical rain forests. In India such forests are found in very wet regions receiving more than 250 cm average annual rainfall. These are climatic forests having luxuriantly growing lofty trees which are more than 45 metres in height. The shrubs, lianas (woody climbers) and epiphytes are abundant because of high rainfall. These forests are found in Andaman

and Nicobar Islands, Western coasts and parts of Karnataka (N. Canara), Annamalai hills (Koorj), Assam and Bengal. The detail account of this is given in the description of mesophytes.

Tropical moist semi-evergreen forests:

These forests are found along the western coasts, eastern Orissa and upper Assam where annual rainfall is between 200 and 250 cm. They are characterised by giant and luxuriantly growing intermixed deciduous and evergreen species of trees and shrubs. The important plants in these forests are the species of Terminalia, Bambusa, Ixora, Dipterocarpus, Garcinia, Sterculia, Mallotus, Calamus, Albizzia, Elettaria, Pothos, Vitis, Shorea, Cinnamomum, Bauhinia, Albizzia, etc. Orchids, ferns, some grasses and several other herbs are also common.

Tropical moist deciduous forests:

These cover an extensive area of the country receiving sufficiently high rainfall (100 to 200 cm) spread over most of the year. The dry periods are of short duration. Many plants of such forests show leaf-fall in hot summer.

The forests are found along the wet western side of the Deccan plateau, i.e. Mumbai, N-E. Andhra, Gangetic plains and in some Himalayan tracts extending from Punjab in west to Assam valley in the east. The forests of Southern India are dominated by Teak (Tectona grandis), Terminalia paniculata, T. bellerica, Grewia tilliaefolia, Dalbergia latifolia, Lagerstroemia, Adina cordifolia, etc. are the other common species in forests of South India. In north, they are dominated by shal (Shorea robusta).

Some other common associates of shal are Terminalia tomentosa, Dellenia species, Eugenia species, Boswellia species and Mallotus philippensis. These forests produce some of the most important timbers of India.

Grasses become important both in seral stages and in the areas under fire.

Littoral and Swamp Forests:

Littoral and Swampy forests include the following types:

(1) Beach forests
(2) Tidal forests or Mangrove forests
(3) Fresh water swamp forests.

Beach Forests:

The beach forests are found all along the sea beaches and river deltas. The soil is sandy having large amount of lime and salts but poor in nitrogen and other mineral nutrients. Ground water is brackish, water table is only a few metres deep and rainfall varies from 75 cm to 500 cm depending upon the area. The temperature is moderate. The common plants of these forests are Casuarina equisetifolia, Borassus, Phoenix, Manilkara littoralis, Callophyllum littoralis, Pandanus, Thespesia, Barringtonia, Pongamia, Cocos nucifera, Spinifex littoreus and a number of twiners and climbers.