

DEFINATION AND MEANING OF "FOREST"

- **Forest:**
- The word is derived from the Latin word "Foris" means "outside".
- Therefore forests are areas covering practically all uncultivated or untended lands covered with rather tall and dense tree growth.
- Forest is defined as an area set aside for the production of timber and other forest produce, or maintained under woody vegetation for certain indirect benefits which it provides.

components of forest (5)

1. It is an uncultivated land area
2. The land area should be occupied by different kinds of natural vegetation essentially by trees or it is proposed to establish trees and other forms of vegetation
3. The trees should form a closed or a partially closed canopy
4. The trees and other vegetation should be managed for obtaining forest produce and / or benefits and
5. It should provide shelter to wildlife, birds-and other fauna.
(Animals)

- **Forestry"** Define forestry and describe in brief branches of forestry?

- **Forestry:**

The theory and practice of all that constitutes the conservation and scientific management of forest and the utilization of their products.

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It also stands for scientific management of forests and continuous production of goods and services.

Branches of Forestry

- Mainly, the forestry has been grouped as follows:

- 1. Basic Forestry
- 2. Applied Forestry

- 1. Basic Forestry: Basic Forestry deals with the theory and practice of constitution and management of forests and utilization of their products.

- Basic Forestry has the following Branches:

- A) **Silviculture**: This refers to theory and practices of raising forest crops, methods of raising tree, their growth and after-cares up to the time of final harvesting. However, in simple words, it is the cultivation of forest trees.
- B) **Forest Mensuration**: In simple language, it is the measurement of forest produce. However, it is defined as the determination of dimensions (e.g. height, diameter, volume, etc.) from, volume, age and increment of single trees, stands or whole woods, either standing or after felling. It concerns with linear area, volume and weight measurements.
- C) **Silvicultural Systems**: A Silvicultural system can be defined as a method of Silvicultural procedure worked out in accordance with accepted sets of Silvicultural principles by which crops constituting forests are tended, harvested and replaced by new crops of distinctive forms.

- **D) Forest Management:** It is the practical application of science, technique, and the economics to a forest estate for the production of some wanted results.

In actual sense, it is the application of business methods to the operation of a forest estate. The Society of American Foresters (SAF) has described it as an application of business methods and technical forestry principles to the operation of a forest property.

- **E) Forest Utilization:** It is a branch of forestry concerned with the harvesting, conversion, disposal and use of forest produce (British Commonwealth Forest Terminology, 1953.). It is a branch of forestry concerned with the harvesting, any necessary processing, and delivery to the consumer of forest produce

- **F) Forest Law:** Law includes any rule of action. The rules and law imposed by the state up on the actions of its citizens for the breach of which they are punishable. Forest law is classified as:

a) Constitutional laws

b) Public laws

c) Private laws; Very essential for protection of forest; Some terms - Forest offence / Forest right / Forest settlement

d) Forest wild life Act WL (protection) Act 1972 Animals / bird.

- **G) Forest Policy:** Branch of forestry concerned essentially, with social and economic aims underlying forest management and forestry development

• 2. Applied Forestry

- This includes those subjects which have the references to other subject but make the essential.

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- a) Dendrology
- b) Forest Ecology
- c) Forest Economy
- d) Forest Entomology
- e) Forest Fire
- f) Forest Genetics
- g) Forest Pathology
- h) Forest Seed technology
- i) Forest soils
- j) Forest statistics.

- k) Forests surveying
- l) Remote sensing
- m) Social Forestry-Social Resent
 - i. Agroforestry
 - ii. Forestry Extension
 - iii. Afforestation
 - iv. Recreation Forestry etc

- Some Other Forestry Branches:
 - 1. Aesthetic forestry
 - 2. Commercial Forestry
 - 3. Community Forestry
 - 4. Extensive Forestry
 - 5. Farm Forestry
 - 6. Multiple use Forestry .

- Functions of Forest in India

- Productive:-They provide timber, fuel, charcoal, beedi leaves, resins, fruits, tanning materials, manure leaves, grass, bamboo, gums, lac etc.



- **Protective:-**Forests protect water sheds, catchments of rivers and streams against erosion.
- **Aesthatic:-**Forests add good appearance, landscaping and a thrilling atmosphere to the locality.
- **Recreational:-**Forest provides picnic resorts and opportunities for sport like hiking, trekking, wild life watching, bird watching.
- **Scientific:-**Study of ecological process of forest crops
- **Ameliorative:-**Forests improve climate and reduce pollution made.
- **Hygienic:-**Forests improve the environment and help in reduction of noise, purify the air and give out oxygen to the atmosphere.
- **Industrial developments:-**Forest meet the need for raw material for industrial development such as Paper pulps, rayon grade pulp, saw milk ply wood, hard board etc.
- **Classification of Forests: Forests can be classified on the basis of:**
 - 1. Age,
 - 2. Method of regeneration,
 - 3. Composition,
 - 4. Ownership,
 - 5. Object of Management,
 - 6. Growing stock
- **1. Classification of Forest On the Basis of Age: Forest is classified into:**
 - A) Even Aged Forest:

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- Even-aged forests, also called regular forests are those consisting of even - aged woods. Even - aged wood means trees of approximately the same age. True even - aged forests can be only man - made forests. In case of forests, which regenerate naturally, some age difference is often allowed. Differences up to 25% of the rotation are usually allowed in cases where forest is not harvested for 100 years or more.
- B) Un-Even Aged Forests:
 - A forest is called uneven - aged or irregular when trees vary widely in age.
 - 2. Classification of Forest On the Basis of Regeneration: Forests are identified into
 - A. High Forest: When regeneration is obtained from seed
 - B. Coppice Forest: When regeneration is through coppice or some vegetative part of the tree.
 - 1. Natural Forest: When the regeneration is obtained naturally, the forests are called natural forests
 - 2. Man Made Forest: When it is obtained artificially, the forests are called Man-made forests or Plantationsg Stock.
- . Classification of Forest On the Basis of Composition: Forests are classified into
 - A. Pure Forests: Pure forests are composed almost entirely of one species, usually to the extent of not less than 50 per cent.

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- **B. Mixed Forests:** Mixed forests are defined as forest composed of trees of two or more species intermingled in the same canopy.
- 4. Classification of Forest On the Basis of Management:** Forests are classified into

- **A. Protection Forests:** Protection forests are those which are managed primarily for ameliorating climate, checking soil erosion and floods, conserving soil and water, regulating stream flow and increasing water yields and exerting other beneficial influences.
- **B. Production Forests:** Production forests are those which are managed primarily for their produce.
- **C. Social Forests:** Social forests where the produce is utilised by neighbouring society.

5. Classification of Forest On the Basis of Ownership: Forests can be classified as

A. Government Forests:

On the basis of Legal status, Government forests are further classified into:

- **Reserved Forests:** A Reserved forest is an area with complete protection, constituted according to chapter II of the Indian Forests Act. 1927.
- **Protected Forests:** A Protected forest is an area subject to limited degree of protection constituted under the provisions of chapter IV of the Indian Forest Act., 1927.
- **Village Forests:** A Village forest is a state forest assigned to a village community under the provisions of chapter III of Indian Forest Act.

B. Private Forests

C. Forests owned by Corporations, Panchayats, Societies and other Agencies.

6. Classification of Forest On the Basis of Growing Stock: A forest can be classified into

A. Normal Forest: A Normal forest is an ideal forest with regard to growing stock, age class distribution and increment and from which the annual or periodic removal of produce equals to the increment and can be continued indefinitely without endangering future yields.

B. Abnormal Forest: Abnormal forest is one which is not normal, i.e. growing stock, age, class, distribution of stems, increment, etc. are either in excess or more usually in deficit than the normal forest

Silviculture

- **Introduction:**

Silviculture means to raising, development, care, reproduction and overall management of forest crops.

- **By Champion and Seth:** The term silviculture, in refers only to certain aspects of the theory and practices of raising of forests crops.

Objectives of Silviculture

Study of silviculture helps to attain the following object:

- **To derive environmental benefits:** Soil and water conservation, control of air and noise pollution, wild life conservation, regulation of climatic condition, regulation of water cycle.

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- **Raising species of more economic value:** Industrial and economic growth through.
- **Production of high-quality timber:** Silviculture techniques help of avoid the problem of crooked, malformed, disease or defective timber and thus help to produce goods quality timber.
- **Production of more volume per unit area:** Unmanaged forests may be too dense or too open. less production, premature death of trees silviculture helps to solve these problems.
- **Reduction of rotation period:** In Unmanaged forests the rotation tends to be longer.
- **Afforestation of blank areas:** Waste lands can be used for forests
- **Creation of plantation:** Man made forests or plantations may be created in placed of natural forests.
- **Employment potential:** In any plantation operation, the labour component account for 60 to 70% of the total financial input.
- **Increase in the production of fuel and fodder:** In development countries like India it is important aspect.
- **Forest Industries:** Resin for resin and turpentine industry, pulp wood for paper industry, industrial wood for match and timber industry, railway, etc, minor forests product based industries.
- **Introduction of exotics:** Successful introduction of exotic species is possible.

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