

## Questions Bank of Silviculture from L1 to L4

### L1

- Define **Forest** and enumerate its importance.
- Define **Forest as defined by FAO** and enumerate its importance.
- Forests cover a **third** of the earth's surface or about **31%** of the **global land area**. However, forests are not equally distributed around the globe.
- **More than half (54%)** of the world's forests are found in only **five countries** (the Russian Federation, Brazil, Canada, the United States of America and China).
- **Two-thirds (66 %)** of forests are found in **ten countries** (the Russian Federation 20%, Brazil 12%, Canada 9%, the United States of America 8%, China 5%, Australia 3%, Democratic Republic of the Congo 3%, Indonesia 2%, Peru 2%, India 2%, Rest of the world 34%).
- About **90%** of all earth's species live in **forests**.
- During the day, trees and plants absorb **carbon dioxide** for photosynthesis and give out **oxygen**.
- Forests are considered as earth's **lungs**.
- Trees and plants regulate **atmospheric temperatures** through **evapotranspiration**.
- Enumerate **Forest structure and explain one of them shortly**.
- **Why** in a dense forest the forest floor is dark? due to the trees above stopping the sunlight from entering the forest. It is estimated that only 2% of the sunlight actually reaches the floor.

### L2

The term of **Silviculture** is **Latin word**, which consists of **two parts**, the first (**Silva**) means the **forest** and the second (**Cultura**) means **development** or **cultivation**, so **Silviculture** means **forest development** or **forest cultivation**.

Define **Silviculture** as defined by **Nyland** (2016), and then write **the objectives** of Silviculture.

Define **Silviculture** as defined by **Nyland** (2016), and then write **the Subjects** of Silviculture based on **Baker** (1950) and **Toumey & Korstian** (1961).

Classify subjects of Silviculture based on **Baker** (1950) and **Toumey & Korstian** (1961) and tell me which classification is the best and why?

The oldest book about Silviculture that was written by **Hans Carl** (1732) entitled (Sylvicultura Oeconomica).

**In Iraq**, Silviculture began in the eighties, especially in the Faculty of Forestry / Mosul University.

**In Iraq**, Most books about Silviculture subjects were written by Yavuz Shafiq Abdullah.

### **L3**

In general, the forests grow naturally under the influence of **environmental factors**, especially **temperature** and **humidity**.

The forest on the planet is **irregularly** distributed.

Gymnosperm forests mean Needle-leaf Forest. However, Angiosperm forests mean Broadleaf Forest.

Deciduous forest means forest trees that fell their leaves in winter. However, Monsoon forest means forest trees which fell **their** leaves in summer.

Define **the Natural Forests and enumerate their types in the world**.

Define **the Artificial Forests and enumerate their types in the world**.

**Tropical Rain Forests** are the forests that grow near the equator where the climate is **warm** and **wet** all the year round.

Tropical Rain Forest has **the greatest diversity of trees** than other formation of natural forests.

Tropical seasonal forest has a **variety of tree species**, but no as diverse as the **Tropical** rainforest.

**Air plant** is plants that grow in the canopy layer whose roots don't reach the ground.

Savannahs are dominated by widely **spread trees** with **grasses** and **hedges**. They are frequently be **thorny** and may grow in **clumps**.

Savannahs forests are found in regions of **low rainfall, poor soil**, and other **poor environmental** features that limit tree growth.

Why Tropical Rainforest is always **active?** due to **presence a suitable environment conditions like temperature, rain and nutrients.**

Why the boreal forests are called **Taiga?** because **the dominant trees in these forests are needle leaf evergreen** of either spruce (*Picea spp.*) and fir (*Abie spp.*) or spruce and pine.

**Forest Plantations** are very large area of **10-100 hectares** or more.

**Forest Plantation** usually consists of **2 to 5 species.**

A **woodlot** is large area of **2-3 hectares** being cultivated with trees.

In most cases, the **woodlot** makes up of **single tree species.**

The **Windbreaks** usually consist of **one** or **two** rows of trees, while the **Shelterbelts** usually consist of **six** or **more** rows of trees.

The main aims of **Road Strip Plantation** are **beautification of town, reduction of the effect of car fumes and provision of shades** along the roads.

Compare between Forest Plantation and Woodlots.

Compare between Shelterbelt and Windbreak.

## **L4**

The total natural forest area in Kurdistan region was about **(7) million donums** or about **60%** of the **total mountainous area** of the region.

The maximum per cent (32.51%) of Iraq's Natural Forest is located in **Erbil** Governorate, while the minimum per cent (0.16%) of Iraq's Natural Forest is located in **Salahaddin** Governorate.

**The Deciduous forest (Oak Forest)** includes 85% of total natural forest area in Kurdistan region-Iraq.

The **dominant trees in the Deciduous forest (Oak Forest)** are three different species of **Oak trees**, which is *Quercus aegilops* - *Quercus infectoria* - *Quercus libani*

The **Coniferous forest (Pine Forest)** in Kurdistan region-Iraq consists **naturally** of **two species**, which are *Pinus brutia* and *Juniperus oxycedrus*.

*Pinus halepensis*, *Pinus penia*, *Cedrus libani*, *Cupressus* spp., and *Thuja orientalis* are **exotic** Coniferous trees in Kurdistan region-Iraq.

**Enumerate the division of natural forests in Iraq according to tree types with an example for each division.**

**Enumerate development stage of trees and explain one of them.**

The trees in **young timber stage** is **economically** called **standard trees**.

The trees in both **mature** and **over mature stages** are called **Veteran Trees** and they are considered as the best stage for cutting and utilization.

At **Seedling stage**, the plant height reaches about **90** cm.

In **large Pole stage** the diameter of trees at (D.B.H) being between **20 – 30** cm.