PLANTAE.

- Cryptogamae. (Seedless Plants.)
  - Thallophyta.
  - Bryophyta.
  - Pteridophyta.
- Phanerogamae. (Seed bearing plants)
  - Gymnosperms. (with Naked Seeds)
    - Conifers.
    - Cycads.
  - Angiosperms. (with covered Seeds)
    - Monocot.
    - Dicot.

Plant kingdom is divided into two subkingdoms.

① Cryptogamae.

⑪ Phanerogamae.

1/. Cryptogamae → It is the group of those plants which do not produce seeds (Seedless).

* They are lower plants.
* Plant body is not fully developed / do not have true stems, roots or leaves.
* They do not have vascular tissues (xylem & phloem).

Examples — Algae, Mosses, Ferns.

- Cryptogamae is categorised into 3 divisions.

(i) Thallophyta → These are simplest plants.
- Plant's body is undifferentiated which is called thallus.
- Lack of vascular tissue.
- Predominantly Aquatic.
- Algae belong to this division. e.g Spirogyra, Ulva, Ulothrix etc.

(ii) Bryophyta → Bryophytes are simple terrestrial (Land) plants.
- They are called Amphibians of Plantae.
- Plant's body is differentiated but lacks vascular tissue.
- They are covered by a waxy cuticle which help them to retain water. e.g - Riccia, Marchantia and Funaria.

(iii) Pteridophyta → Plants which belong to divison are fully developed.
- Body is differentiated into root, stem and leaves.
- They have vascular tissue (xylem and Phloem) for transport of materials. e.g Fern, Marsilea.

- Ferns are the most developed seedless plants. They have large leaves which are divided into leaflets.

2// Phanerogamae :— Phanerogames are higher plants which produce seeds

- They have true stem, roots and leaves.
- They have also vascular tissue.
- Phanerogames are divided into two groups / divisions.

(I) Gymnosperms → In course of evolution Gymnosperms appeared before the Angiosperms.

- Plants have naked / uncovered seeds
- They are evergreen, perennial plants.
- They are also woody.
  e-g Pines, Deodar, Cycas.
- Gymnosperms are of two types
  (I) cycads — Palm like tree, not true Palm.
  (II) Conifer — Evergreen plants
  e-g - Pines, Fir, Cedars -

(II) Angiosperms → These plants are also called Flowering plants. e-g Maize, Guava & Mango

- Fully developed / differentiated.
- Seeds contained in Fruits.
- Types — (I) Monocot (II) Dicot.

Monocotyledons.

- These are angiospermic plants with single cotyledon (seed leaf).
- Plants have fibrous root system.
- Venation — Parallel.
- Vascular bundles arranged in a complex manner.
- Flowers — Trimerous.
- Examples — Bamboo, Rice, Wheat, Palms etc

Dicotyledons.

Dicot plants have two cotyledons in their seeds. e.g Grams, Peas, Beans, Sunflower etc.

- Plants have tap root system.
- Stem — strong and woody.
- Venation in leaves — Reticulate. (like a network)
- Vascular bundles arranged in a ring.
- Flowers — Pentamerous.

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