



# G D GOENKA PUBLIC SCHOOL

Subject: Ev.Sc. / 5<sup>TH</sup>

Aspect: Tutorial

18th March 2022(Shift I)

Lesson no.: 1 Growing Plants

**Learning Objective:** To understand the concept of vegetative propagation.

**Skills:** Development of environmental sensitivity.

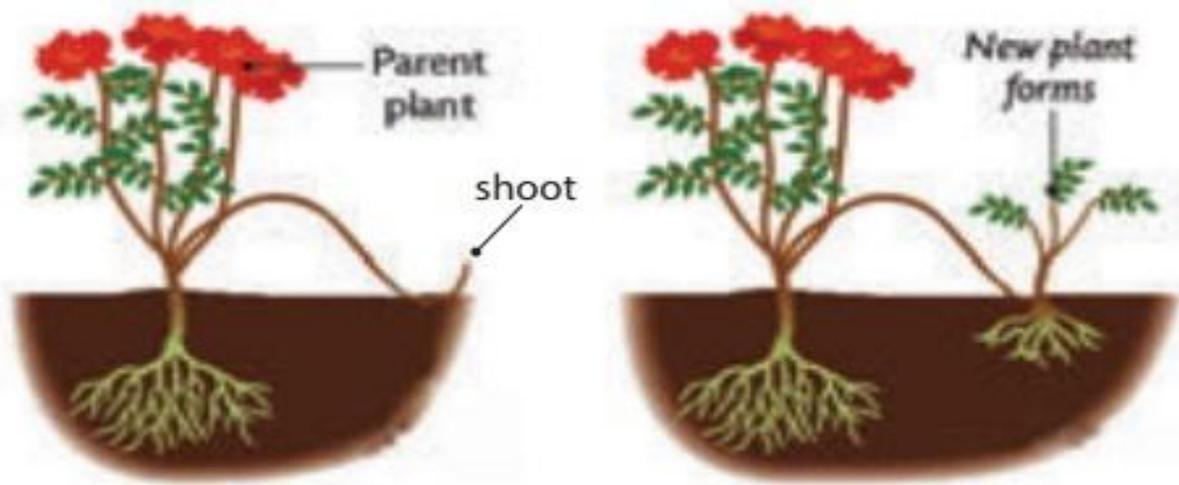
## **Vegetative Propagation**

Vegetative reproduction is any form of asexual reproduction occurring in plants in which a new plant grows from a fragment of the parent plant or a specialized reproductive structure. i.e when a plant reproduces asexually through the means of its roots, stem and leaves, then this process is said to be Vegetative Propagation. The respective part of a plant will be useful to produce new plant species, apart from its seeds. Some of the real-time vegetative propagation examples are Banana, sweet potato and pineapple.

Vegetative propagation is grouped into the following two types:

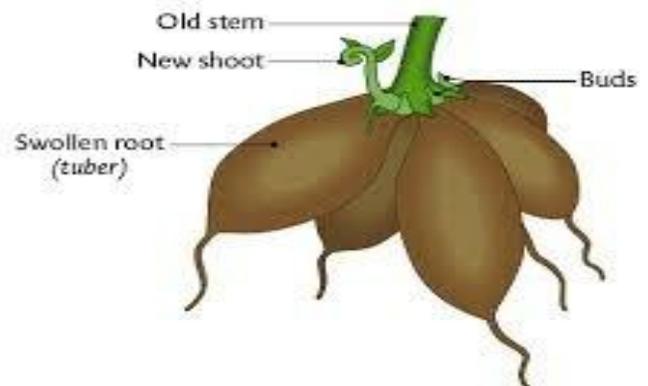
1. Natural vegetative propagation including reproduction by stem, leaf, and root.
2. Artificial vegetative propagation includes reproduction by cutting, layering and grafting.





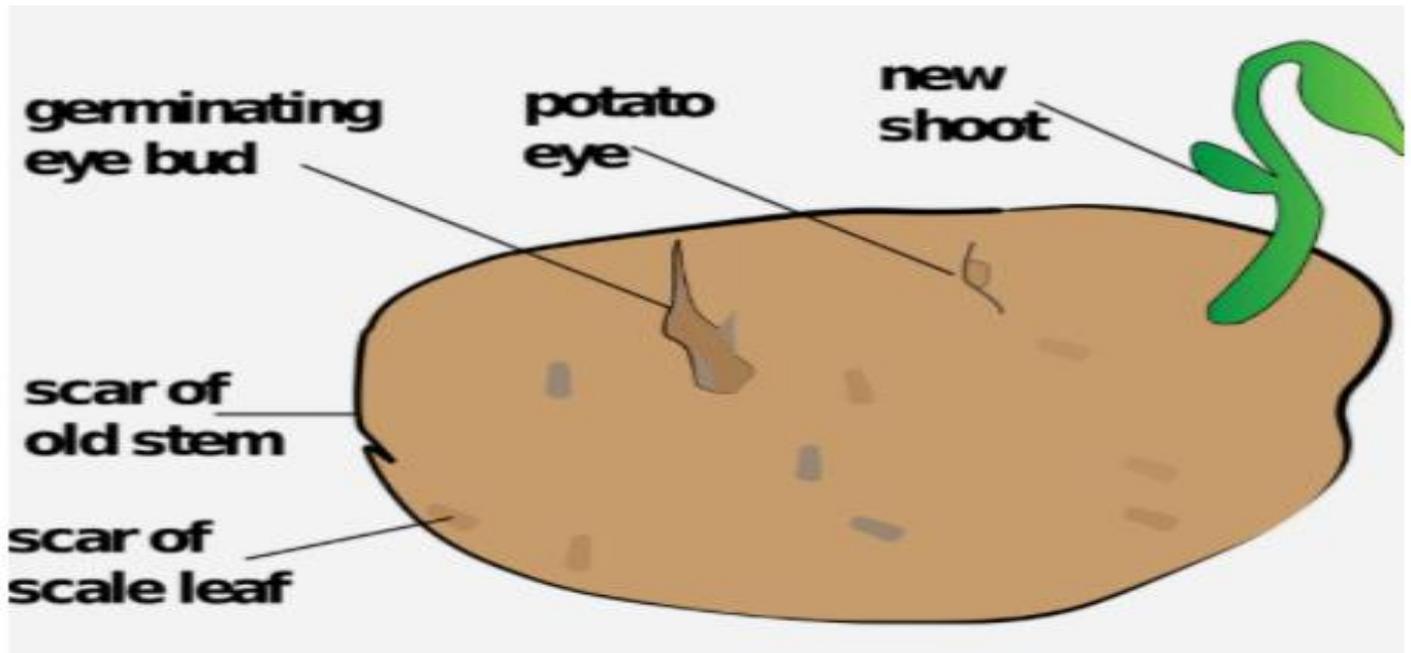
- **Propagation by Roots**

Some modified tuberous roots can be propagated vegetatively, when planted in soil. The buds present on the roots grow as leafy shoots called slips above ground and adventitious roots at their bases. Each slip gives rise to a new plant. eg. Sweet potato, Dahlia and Tinospora.



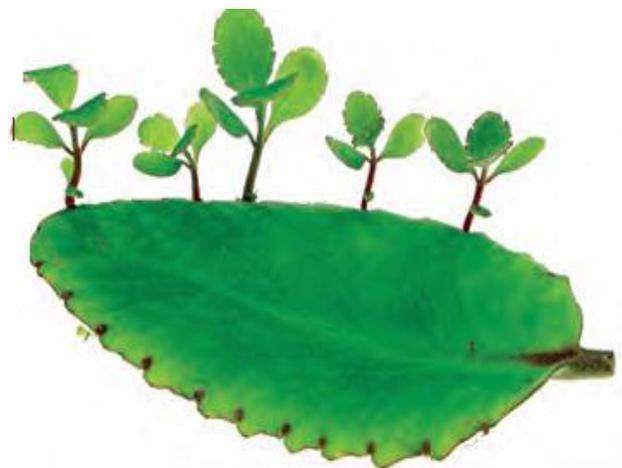
- **Propagation by Underground Stem**

These plants develop non-green, underground perennial stems. These store reserve food, propagate vegetatively and are adapted for perennation. They give rise to aerial shoots that grow actively during favorable conditions. On the approach of unfavourable conditions, the aerial shoots die. The underground stems remain dormant during the unfavourable conditions. Once the conditions become favourable, they produce new aerial shoots. Various types of underground stems are Rhizome, Tuber, Bulb, Corm.



- **Propagation by Leaves**

Leaves are not a common means of vegetative propagation in nature. However, Bryophyllum is known for its remarkable ability to reproduce by leaves. In Bryophyllum plantlets develop from the buds present on the marginal notches of the intact leaves. These plantlets become detached and develop into independent plants.



Budding in Bryophyllum

***Homework:***

**After maintaining the index, write the answers of below mentioned questions on your Ev.Sc notebook, neatly.**

**Q1.** A plant can produce new plants from its leaves, stem, and roots using asexual reproduction. What is the term given to this method of reproduction? Define the same (term).

**Q2.** Name two plants that are propagated by underground stems.

GDGPS