



CHAPTER - 12

REPRODUCTION IN PLANTS

NOTES:

- Reproduction is the production of new individuals from their parents.
- There are different ways of reproduction in plants. They are
 - a. Asexual reproduction
 - b. Sexual reproduction
- A flowering plant can be divided into two parts. They are
 - a. Vegetative part (Root, stem and leaves)
 - b. Reproductive part (Flowers)
- Asexual reproduction : In this type of reproduction plants can give rise to new plants without seeds.
- Sexual reproduction: In this type of reproduction plants are obtained from seeds.
- There are various types of asexual reproduction. They are
 - a. Vegetative propagation: In this type of asexual reproduction, plants are produced from vegetative parts i.e from shoots, stems and leaves. Eg. Reproduction in potato , Bryophyllum etc.
 - b. Budding: In this type of asexual reproduction a new organism develops from an outgrowth or bud due to cell division at one particular site. Eg. Reproduction in yeast.
 - c. Fragmentation: It is form of asexual reproduction in which an organism is split into fragments. Each of these fragment develop into matured full grown individuals.
Eg. Reproduction in spirogyra.
 - d. Spore formation: In spore formation, the parent plant produces hundreds of reproductive units called spores. These spores travel in air and land on food or soil. There they germinate and produce new plants. Eg. Reproduction in ferns.
- Node: It is a part of stem/ branch at which leaves arise.
- Axil : It is the point of attachment of the leaf at the node.

- Plants produced by vegetative reproduction take less time to grow and bear flowers and fruits earlier than those produced from seeds.
- Plants produced by vegetative propagation are exact copies of the parent plant as they are produced from a single parent.
- The small bulb like projection coming out from the yeast cell is called a bud.
- Stamens are the male reproductive parts whereas pistils are the female reproductive parts.
- Unisexual flowers : Flowers which contain either only pistil or only stamen are called unisexual flower. Eg. Flowers of corn, papaya and cucumber.
- Bisexual flower: Flowers which contains both stamen and pistils are called bisexual flower. Eg. Flowers of mustard, rose etc.
- A stamen consists of anther and filament. Anther contains pollen grains which produced male gamete.
- A pistil consists of stigma, style and ovary. Ovary contains one or more ovule. The female gamete or egg is formed in an ovule.
- Male and female gametes fused to form a zygote. It is a fertilized egg which develops into an embryo.
- Pollination : The transfer of pollen from the anther to the stigma of a flower is called pollination. Pollination is of two types. They are;
 - I. Self pollination; In this type of pollination the pollen lands on the stigma of the same flower or another flower of the same plant.
 - II. Cross pollination; In this type of pollination the pollen lands on the stigma of a flower of different plant of the same kind.
- Pollination takes place in plants with the help of wind water and insects.
- Fertilization: The process of fusion of male and female gametes to form a zygote is called fertilization.
- After fertilization, the ovary grows into a fruit whereas ovules developed into seeds which contains developing embryo.
- Seeds are dispersed to different places by wind , water and animals.
- Seed dispersal helps the plants to
 - i. Prevent overcrowding
 - ii. Avoid competition for sunlight, water and minerals
 - iii. Invade new habitat for wider distributions.