

Reproduction

1. What is Reproduction?

- ◆ The ability of an organism to produce new generation of individuals of the same species is called reproduction.

2. What is vegetative propagation? Explain with suitable examples?

- ◆ Without involvement of male and female gametes new plants can be reproduced from the vegetative parts like roots, stem and leaves. This type of reproduction is called vegetative Reproduction.

- ◆ **Vegetative Reproduction through stem:**

A special branch which develops from the underground part of the stem of parent plant is called sucker.

Ex: Chrysanthemum

- ◆ **Vegetative propagation through Roots:**

In curry leaf plant you have observed a number of young plants arising around the main plant. These young plants develop from the buds present on the root. They develop into independent plants.

- ◆ **Vegetative Reproduction through leaves:**

In Bryophyllum buds develop on the depressions of leaf margin. The usual position of leaf buds is either at terminal part of shoot or in the margins of leaf. These buds are called Epiphyllous buds. These buds cut and placed in the soil the buds develop into new young plants.

3. What is Asexual Reproduction? Mention the methods of reproduction and explain any two of them?

- ◆ In this Reproduction there is no involvement of male and female gametes, but new plants and

animals are reproduced from the Asexual methods; such as Fragmentation, Fission, Budding and Sporulation.

- ◆ **Budding:**

It is a kind of Asexual Reproduction method.

Ex: Yeast. In yeast before budding a soft zone appears in the cell wall of vegetative cells, small bud bulges out from this zone. At this stage, nucleus of the vegetative cell undergoes a mitotic division. One of the daughter nucleus will be pushed into a bud. A constriction is formed between the vegetative cell and the bud.

- ◆ Finally the bud pinches off into a daughter cell. The vegetative bud can give rise to buds which can grow into yeast cells.

- ◆ **Sporulation:**

Sporulation is also a kind of Asexual Reproduction method.

Ex: Fungi

- ◆ In some cases spores are formed in sac like structures called sporangium. In some cases spores at the tip of a special structures called conidiophore. Conidiophore gives rise to conidia.
- ◆ In Asexual Reproduction the fungal hyphae differentiation into structures like sporangium and conidiophores etc. which produce spores and conidia.