

## Long Questions Answer

① What is vegetative reproduction?

Ans) New plants can be produced by certain parts of a plant, ~~seed~~ such as the leaf, stem, and root. These vegetative parts of a plant that are giving rise to new plants are called propagules and the process is called vegetative reproduction. It can be either natural or artificial.

② Briefly explain why a gardener prefers to grow certain plants vegetatively?

Ans) A gardener prefers to grow certain plants vegetatively because of the following advantages:

① Reproduction by vegetative parts takes place in shorter time.

② New plants, ~~that~~ thus produced, spread very fast in a small area.

Ans) Pollination is the process in which the pollen grains from the anthers are transferred to the stigma of a flower of the same species.

A pollen grain containing the male gametes lands on the surface of stigma. Upon absorbing moisture, the pollen grain begins to grow a pollen tube which starts lengthening in the direction of ovule, towards the exel. The pollen tube penetrates the female gametophyte and enters the ovule.

⑤) Imagine all the seeds produced by a plant happened to fall under the same plant and sprout into new plants. Mention any two problems that will be faced by the new plants.

Ans) The two problems that will be faced by the new plants are:-

- ① There will be shortage of space for their growth of their roots.
- ② The new plant will fail to get nutrition, light

etc that will reduce development

Q) What is a flower? Draw a neat labelled diagram showing the L.S of a typical flower

Ans) The flower is a reproductive part of a plant. A flower help in the sexual reproduction in plants. The flower is attached to the shoot by means of a stalk or pedicel. A flower contains male parts called stamens and female parts called carpels. flowers bearing both male and female parts are called bisexual flowers whereas those bearing only male or female parts are called unisexual flowers.

Q) Write short notes on the following

a) Micropropagation - It is the propagation of plants by tissue culture technique. It provides rapid propagation of identical individuals. This technique is very productive for superior varieties. It is very useful in cases where seeds are dormant. The embryo in these seeds can be cultured and be micropropagated.

⑧ How is artificial pollination useful to plant breeders? Discuss briefly.

Ans) Artificial pollination means transfer of pollen grains to the stigma manually. It is practised by plant breeders for developing new varieties. The breeders select two different varieties of a crop plant with desired characteristics. For example, one variety may be high-yielding and the other may be disease resistant.