

Case-Based Questions – Reproduction in Plants (Class 7, Science)

Case 1: Vegetative Propagation

Riya planted a piece of a money plant stem in moist soil. After a few days, she noticed new roots and leaves growing from it. She also observed that a potato kept in her kitchen sprouted small buds, which later grew into new plants when planted in soil.

1. Which method of reproduction is shown in both cases?
2. What is the reproductive part used in the money plant?
3. What are the small buds on potato called?
4. Name two other plants that reproduce in the same way.
5. What type of reproduction is shown here — sexual or asexual?

Case 2: Parts of a Flower

A science teacher gave her students a hibiscus flower and asked them to identify its parts. Rohan observed yellow, powdery grains on the anther and a swollen part at the base of the pistil. He also saw that the stigma was sticky.

1. What are the yellow, powdery grains called?
2. What is the swollen part at the base of the pistil?
3. What is the function of the sticky stigma?
4. Which are the male and female parts of the flower?
5. Name the process of transfer of pollen from anther to stigma.

Case 3: Pollination and Fertilization

In a garden, bees were visiting flowers of mustard and transferring pollen grains from one flower to another. Later, fruits were formed in the plants.

1. Which process is carried out by bees here?
2. What type of pollination occurs in this case?
3. What happens after pollination?
4. Name the cell formed after fertilization.
5. What part of the flower develops into a fruit?

Case 4: Seed Formation and Germination

After fruits mature, they contain seeds. When seeds get proper moisture, warmth, and air, they sprout into new plants. Ritu noticed that from the seed, one part grew upward and another downward.

1. What is the process described here?
2. Name the part that grows upward.
3. Name the part that grows downward.
4. What conditions are necessary for this process?
5. What protects the embryo inside the seed?