



CLASS NOTES-ANSWERS

I. Choose the correct word to complete each sentence.

- 1) Filaments (Filaments/~~Anthers~~) are long and narrow.
- 2) Watermelon (Watermelon/~~Mango~~) plants have unisexual flowers.
- 3) Orchid flowers show self (self/~~cross~~) pollination.
- 4) Bryophyllum reproduces with the help of leaves (leaves/~~flowers~~).

II. Choose the correct word to complete each sentence.

- 1) Sepals are green and leaf-like parts of a flower.
- 2) Anthers are parts of stamen.
- 3) Ovules are present in the ovary.
- 4) Potatoes are underground stems.

III. Solve the crossword with the help of the clues.

Across

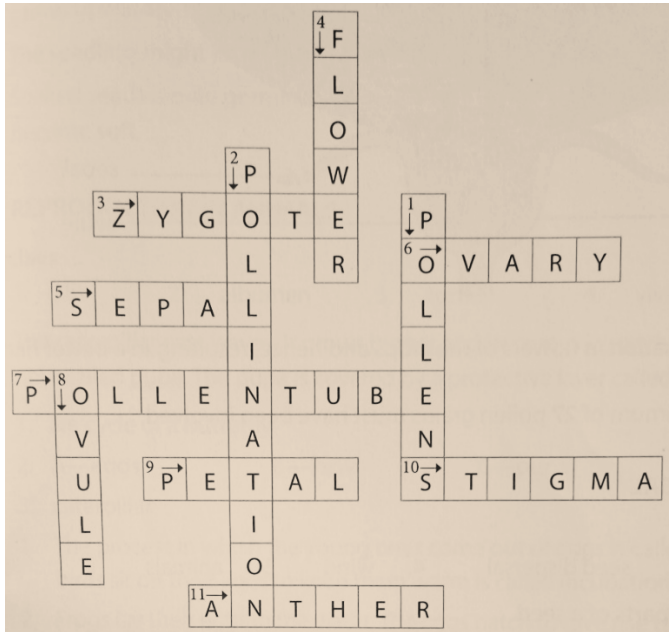
3. the product of fertilization
5. protects the flower bud before it opens
6. the swollen, lower end of the carpel that contains the ovules
7. a long tube growing from a pollen grain through the style to the ovule
9. the coloured part of a flower that attracts insects
10. the part of the flower where pollen grains land during pollination
11. the male part of a flower that produces pollens

Down

1. the male cells of a flower
2. the transfer of pollens from the anther to the stigma of a flower



4. the reproductive part of a plant
8. the part that contains egg cell



IV. Answer the following questions.

1) Compare and contrast between the following.

a) filament and style

Answer: Filament is a part of the stamen, that is, the male reproductive part of a flower and style is a part of the carpel, that is, the female reproductive part of a flower.

b) unisexual and bisexual flower

Answer: Flowers containing either the male or female reproductive parts are called unisexual flowers, whereas flowers with both the male and female reproductive parts are called bisexual flowers.

c) pollen grains and ovules

Answer: The powdery materials on the anther containing the male



cells are called pollen grains, and the part of the flower containing the female cells is called ovules.

d) self-pollination and cross-pollination

Answer: The transfer of pollen grains from the anther to the stigma of the same flower or another flower on the same plant is called self-pollination. The transfer of pollen grains from the anther of one flower to the stigma of another flower on another plant of the same kind is called cross-pollination.

2) Define pollinators by giving an example.

Answer: The agents of pollination are called pollinators. For example, wind, water, birds, and insects.

3) Explain the process of fertilisation in plants.

Answer: Once a pollen grain falls on the stigma of a flower of the same kind, it develops a long tube called the pollen tube. The pollen tube grows downwards through the style towards the ovary. The male cells are present inside the pollen tube. When the tip of the pollen tube reaches the ovary, it opens and the male cells enter the ovule. One male cell then fuses with one egg cell to form the zygote. The fusion of the male cell with the egg cell is known as fertilization.

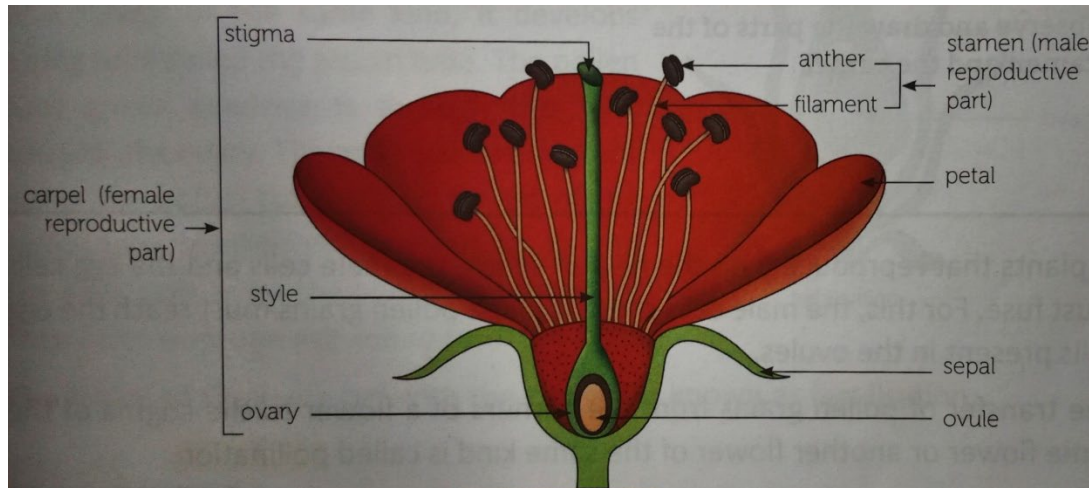
4) List the changes that occur in a flower after fertilization.

Answer: After fertilization, the ovary grows in size and forms the fruit. Ovules change into seeds. The petals and stamens mostly dry and fall off. Once the seeds inside the ovary are fully developed, the fruit ripens.

5) What is tissue culture?

Answer: The method of growing new plants in laboratories from a single cell is called tissue culture.

V. Label the parts of a flower.



Higher Order Thinking Skills

Think and answer.

1) A farmer growing vegetables observes that he has a better harvest of his crops when beehives are seen on trees nearby. Analyse and explain his observation.

Answer: Bees are good pollinators who help in the process of pollination in flowers of the crops and hence, resulting in a better harvest for the farmer.

2) If a fruit contains 27 seeds, what do you think must have been the minimum number of pollen grains involved during the process of fertilization.

Answer: For a fruit to contain 27 seeds, a minimum of 27 pollen grains must have been involved.