

# WORKSHEET 2

## CHAPTER 4 – POLLINATION AND FERTILIZATION

### A. Name the following.

1. Transfer of pollen from anther to stigma of the same flower.
2. Transfer of pollen grains from anther to stigma of another flower on another plant of same species.
3. Maturation of anther and stigma of a flower at the same time.
4. Condition in which anther and stigma are so placed that pollen grains from the anther are unable to reach the stigma in the same flower.
5. Pollination by insects.

### B. State whether the following statements are True or False.

1. After fertilization, ovary wall changes into pericarp.
2. Endosperm is triploid in nature.
3. Cleistogamy is an adaptation for cross fertilization
4. Pollination can occur between plants of different species.
5. Self-pollination leads to loss of vigour and vitality of plant variety.

### C. Choose the correct option.

1. Cleistogamous flowers are
  - a. self pollinated.
  - b. insect pollinated.
  - c. bird pollinated.
  - d. wind pollinated.
2. Secondary nucleus present in the middle of the embryo sac is
  - a. tetraploid.
  - b. triploid.
  - c. diploid.
  - d. haploid.
3. Device for self-pollination is
  - a. heterostyly.
  - b. dichogamy.
  - c. unisexuality.
  - d. none of these.
4. Egg apparatus consists of
  - a. egg and antipodals.
  - b. polar nuclei.
  - c. egg and synergids.
  - d. egg.
5. Pollination by bird is known as
  - a. chiropterophily.
  - b. ornithophily.
  - c. anemophily.
  - d. zoophily.

Name: .....

Teacher's signature: .....

Class: ..... IX .....

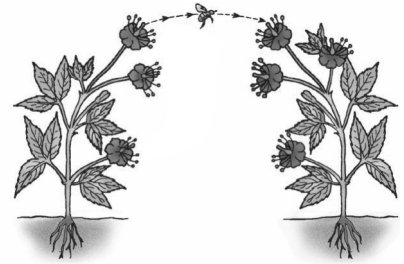
Date: .....

**D. Explain the following terms with examples.**

1. Homogamy
2. Artificial pollination
3. Heterostyly
4. Protandry
5. Hydrophily

**E. Study the figure given alongside and answer the following questions.**

1. Identify the process depicted in figure.
2. Define the process.
3. State the advantages of this process.
4. Give examples of few plants where this process takes place.
5. How does nature favour this process?



# ANSWERS

## WORKSHEET 2

### A. Name the following.

1. Autogamy
2. Allogamy
3. Homogamy
4. Herkogamy
5. Entomophily

### B. State whether the following statements are True or False.

1. True
2. True
3. False
4. False
5. True

### C. Choose the correct option.

1. a.
2. c.
3. d.
4. c.
5. b.

### D. Explain the following terms.

1. Homogamy – When the anther and the stigma of a flower mature at the same time, ensuring self-pollination, it is known as homogamy. E.g. Rice, wheat and *Mirabilis jalapa*
2. Artificial pollination – Sometimes, man artificially transfers pollens to the stigma, known as artificial pollination. E.g. Wheat, maize.
3. Heterostyly – Condition of bisexual flowers in which length of style and position of anther is different to prevent self-pollination. E.g. Primrose.
4. Protandry – When the anthers of the flower mature earlier than the stigma to prevent self-pollination, it is known as protandry. E.g. Okra, sweet pea.
5. Hydrophily – Pollination by water is known as hydrophily. E.g. *Vallisneria*, water weeds.

### E. Study the figure given alongside and answer the following questions.

1. Cross-pollination.
2. The transfer of pollen grains from anther of a flower of one plant to the stigma of a flower of another plant of the same species is known as cross-pollination.
3. Advantages–
  - a. Cross-pollination is a source of variation in offsprings because of intermixing of genetic make up of two plants.
  - b. The seeds produced are viable and healthier and have better germinating capacity.
  - c. Seeds produce healthier offsprings.
4. Grass, maize, sweet pea, dandelion
5. Nature favours this process by
  - a. Unisexuality,
  - b. Dichogamy,
  - c. Self-sterility,
  - d. Herkogamy and
  - e. Heterostyly.