



**Class notes**

**NAME:** \_\_\_\_\_

**DATE :** \_\_\_\_\_

**CLASS: VII DIVISION:** \_\_\_\_\_

**SUBJECT: Science**

**PREPARED BY: Ms. Swati more**

**LESSON: 12**

**I. KEY WORDS:**

1. Budding
2. fragmentation
3. embryo
4. gametes
5. zygote
6. sporangium
7. pollination
8. ovule
9. pollen tube
10. asexual reproduction

Preactivity –sketch the reproductive parts of a flower.

**II. SHORT ANSWER QUESTIONS:**

Q1. Explain what you understand by sexual reproduction.

Ans: When two parents are involved in reproduction, the method is called sexual reproduction. The male and female gametes fuse during fertilization to produce zygote. The zygote subsequently develops into an embryo which further develops into a new individual.

Q2. State the main difference between asexual and sexual reproduction.

<b>S. No.</b>	<b>Asexual Reproduction</b>	<b>Sexual Reproduction</b>
<b>1.</b>	Only one parent is needed.	Two parent (Male and female gametes) are

- |    |   |  |
|----|---|--|
| 2. | Offspring is normally similar to parent.                | required.<br>Offspring shows variation with respect to parent. |
| 3. | Yeast, hydra, spirogyra etc. show asexual reproduction. | Animals, human, insects etc. show sexual reproduction.         |

Q3. Explain the difference between self-pollination and cross-pollination.

Ans:

S. No.	<b>Self-Pollination</b>	<b>Cross-Pollination</b>
1.	Pollen grains are transferred to stigma of same flower.	Pollen grains are transferred to stigma of different flower.
2.	Pollinating agent is not required.	Pollinating agent such as wind, water, insects, etc. is not required.
3.	Examples: Peanuts, sunflower, etc.	Examples: Mango, rose and most of the flowering plants.

### LONG ANSWER QUESTIONS:

Q1. Describe the different methods of asexual reproduction. Give examples.

Ans: The different methods of asexual reproduction:

**Vegetative propagation**

It is a type of asexual reproduction in which new plants are produced from roots, stems, leaves and buds.

**Budding:**

Organisms such as Hydra, a bud develops as an outgrowth at one specific site. These buds develop into tiny individuals and when fully mature, detach from the parent body and become new independent individuals.

**Fragmentation:**

When water and nutrients are available algae grow and multiply rapidly and breaks up into two or more fragments. These fragments or pieces grow into new individuals.

**Spore formation:**

The spores are asexual reproductive bodies. Each spore is covered by a hard protective coat to withstand unfavourable conditions such as high temperature and low humidity. So they can survive for a long time. Under favourable conditions, a spore germinates and develops into a new individual.

Q2. How does the process of fertilisation take place in flowers?

Ans: Once pollen grain spreads on the stigma, it produces a pollen tube. This process is called germination of pollen grain. The pollen tube penetrates the style and reaches the ovary. Male nucleus is transferred through this pollen tube. Finally, fusion of male and female nuclei takes place inside the ovary. This step is called fertilization.

Q3. Describe the various ways by which seeds are dispersed.

Ans: Following are the various methods of seed dispersal:

**Dispersal by Wind:** Seeds of some plants are light-weight and some hair-like or wing-like structures are present on them. Such seeds float on air and are thus dispersed by wind. Example: Dandelion, maple, drumstick, etc.

**Dispersal by Water:** Dispersal by water takes place in some aquatic plants and in some which grow near a water body. Seeds of water lily float and thus dispersed by water. The coconut seed has a tough fibrous covering which has plenty of air inside. This helps the coconut seeds in floating on water.

**Dispersal by Animals:** Some seeds have spine like structures on them. They get stuck to the fur of animals and thus get spread to different places. Examples; Beggar tick, Xanthium, etc. Some seeds are swallowed by birds and animals along with fruits. These seeds get dispersed with bird or animal droppings.

**Dispersal by Bursting:** Some fruits burst open when they mature. The force of bursting is enough to spread the seeds. Examples; Ladyfinger, castor, balsam, etc.

**Dispersal by Humans:** Human beings also help in dispersal of seeds, especially during farming.

Pre –activity.- describe the process of fragmentation with the help of a diagram.

