SCIENCE

CHAPTER 12: REPRODUCTION IN PLANTS

Question 1. Plants produced by vegetative propagation take

(a) long time to grow

(b) less time to grow

(c) both (a) and (b)

(d) none of these

Question 2. Part of the plant that take part in sexual reproduction is

(a) seed

(b) fruit

(c) flower

(d) branch

Question 3. Vegetative propagation in sweet potato takes place by

(a) root

(b) leaves

(c) seed

(d) stem

Question 4. The 'eye' of the potato plant is what

(a) the root is to any plant

(b) the bud is to a flower

(c) the bud is to Bryophyllum leaf

(d) the anther is to stamen

Question 5. Vegetative propagation is a type of

(a) asexual reproduction

(b) sexual reproduction

(c) binary fission

(d) none of these

Question 6. The ovaries of different flowers may contain

(a) only one ovule

(b) many ovules

(c) one to many ovules

(d) only two ovules

Question 7. Yeasts reproduce by

(a) fragmentation

(b) budding

(c) vegetative propagation

(d) layering

Question 8. In fungus, reproduction takes place by

(a) budding

(b) spore formation

(c) fragmentation

(d) binary fission

Question 9. Spirogyra reproduces asexually by

(a) spore formation

(b) fragmentation

(c) budding

(d) cutting

Question 10. In fern, asexual reproduction takes place through

(a) spore formation

(b) fragmentation

(c) budding

(d) binary fission

Question 11. Which of the following contains male gamete?

(a) Filament

(b) Ovule

(c) Pollen

(d) Anther

Question 12. The zygote develops into

(a) a seed

(b) an ovule

(c) a fruit

(d) an embryo

Question 13. Which of the following plant bear bisexual flower?

(a) Corn

(b) Papaya

(c) Cucumber

(d) Mustard

Question 14. Which of the following is a part of a pistil?

(a) Stigma

(b) Anther

(c) Filament

(d) Pollen

Question 15. Which of the following is not a part of pistil?

(a) Ovary

(b) Ovule

(c) Anther

(d) Style

➢ Fill In the Blanks:

1. There are ..... modes of reproduction in plants.
2. ..... holds the spores inside it.
3. Mosses reproduce by .....
4. In the process of budding, a small bulb-like outgrowth called ..... is formed from the ..... cell.
5. In the method of spore formation, small spherical bodies called ..... are produced.
6. Spirogyra reproduces by .....

➢ True or False:

1. Sweet potato reproduces by seeds.
2. The roots of Dahlia give rise to new plants.
3. Plants produce seeds as a result of sexual reproduction.
4. Any detached part of a plant can grow into a new plant.
5. In vegetative propagation, the new plants are not same as that of the parent plant.
6. Plants produced in sexual reproduction have the characters of only male parent.

➢ Very Short Question:

1. What is unisexual flower?
2. The fusion of male and female gametes is termed as.
3. Name the different modes of asexual reproduction.
4. Name vegetative parts of plants.
5. Name the reproductive organ of a flowering plant.

6. State the two types of reproduction in plants.
7. What happens in sexual reproduction?
8. Where the seeds are formed?
9. What is a node?
10. Plant has buds on the edges of its leaves are known as.

➢ Short Questions:

1. Why reproduction is an essential life process?
2. What do you mean by vegetative propagation? Explain with example.
3. What is sexual reproduction? Explain with example.
4. Explain different parts of a flower?
5. Explain vegetative propagation.
6. How is zygote formed in plants?
7. How does Differentiate between self-pollination and cross-pollination.
8. Explain flower of a plant.

➢ Long Questions:

1. What is the function of RBCs?
2. Does transpiration serve any useful function in the plants? Explain.
3. Explain stomata and its function in plants.

✓ Answer Key-

➢ Multiple Choice Answers:

1. (b) less time to grow
2. (c) flower
3. (a) root
4. (c) the bud is to Bryophyllum leaf
5. (a) asexual reproduction
6. (c) one to many ovules
7. (b) budding
8. (b) spore formation
9. (b) fragmentation
10. (a) spore formation
11. (c) Pollen

12. (d) an embryo
13. (d) Mustard
14. (a) Stigma
15. (c) Anther

➢ Fill In the Blanks:

1. two
2. Sporangium
3. spore formation
4. bud, parent
5. spores
6. fragmentation

➢ True or False:

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

➢ Very Short Answers:

1. Answer: A flower may have either male or female reproductive parts. Such a flower is called unisexual flowers.
2. Answer: Fertilisation
3. Answer: There are different methods by which plants reproduce asexually. They are vegetative propagation, budding, fragmentation and spore formation
4. Answer: Root, stem and leaves.
5. Answer: Flower
6. Answer: Asexual and sexual.
7. Answer: In sexual reproduction, the male and the female gametes fuse to form seeds that eventually develop into new plants.
8. Answer: Inside the Fruits.
9. Answer: A node is a part of the stem from where a leaf grows.
10. Answer: Bryophyllum

➢ Short Answers:

1. Answer: Reproduction is essential for continuation of the species from generation to generation.
2. Answer: Vegetative propagation is the ability of plants to reproduce by using vegetative parts like roots, stems and leaves. example: Yeast, Hydra, Bryophyllum reproduce by budding, algae and fungi reproduce by spores
3. Answer: Sexual reproduction is the process in which two components male and female are involved to produce offspring of their own kind. The flower is a reproductive organ of a flowering plant.
4. Answer: Following are the parts of flowers:
   - Sepal: Green leafy part of flower that protect flower in bud condition.
   - Petal: Coloured leafy part of flower that attract insect for pollination
   - Stamen: The male parts of flower that contain pollen grain
   - Pistil: The female parts of flower that contain ovary at bottom
5. Answer: It is a type of asexual reproduction in which new plants are produced from roots, stems, leaves and buds. Since reproduction is through the vegetative parts of the plant, it is known as vegetative propagation. The plants like rose or champa can be propagated through Vegetative propagation.
6. Answer: When male gamete present in pollen grain moves into ovules and fuse with female egg cell inside ovules and zygote is formed. This process is called fertilization.
7. Answer: After pollination, pollen grain germinates on the stigma and moves through style to reach into ovules and fuse with female gamete, thus fertilization occurs. Inside ovary, the ovule develops into seed. As seed forms, the ovary increases in size and became fruit.
8. Answer: It is a type of asexual reproduction in which new plants are produced from roots, stems, leaves and buds. Since reproduction is through the vegetative parts of the plant, it is known as vegetative propagation. The plants like rose or champa can be propagated through Vegetative propagation.

➢ Long Answers:

1. Answer: Modes of reproduction that evolve only one parent is called Unisexual reproduction.

   (a) Fission: The mode of reproduction in which unicellular organism split into two equal halves and produce new ones is called binary fission. For example amoeba and bacteria

   (b) Fragmentation: The mode of reproduction in which body of plant breaks up into smaller fragments and each fragment grows into a new individual is known as Fragmentation, e.g. Spirogyra, algae.

   (c) Budding: The mode of reproduction in which small buds develop and get separated and

matured into new organisms is called Budding. E.g. Yeast, Hydra, Bryophyllum.

(d) Spore formation: The mode of reproduction takes place by means of spores is called spore formation, e.g., algae and fungi

The spores are covered by thick walls that protect them until they come into contact with another moist surface and can begin to grow.

2. Answer: The sexual reproduction in flowering plants involves pollination and fertilization.
    - Pollination: Transfer of pollen grains from the anther to the stigma is called pollination. Pollen grains are transferred mainly by wind, water and insects. They are called as pollinating agents.
    - Fertilization: The fusion of a male gamete with egg is known as fertilization. The fertilized egg is known as zygote which develops into embryo.
3. Answer:
    - Cutting: Here the cuttings of the "parent" plant are removed and placed in a suitable environment so that they can grow into a whole new plant. For example rose cutting.
    - Layering: The stem is bent down and the target region buried in the soil. The buried part of stem develops roots and is detached from the plant and develops into new plant.
    - Grafting: In grafting a shoot or bud of a selected, desired plant (scion) is grafted onto the stock of another type of plant.
4. Answer:

    Following are the advantages of vegetative reproduction:
    - Vegetative production allows plants to produce new plants quickly without any reproductive organs.
    - The plants produced by this method are exact copies of the parent plant.
    - New varieties of plants having required characteristics can be developed by this method.