

NCERT SOLUTIONS

CLASS-VII SCIENCE

CHAPTER-12 REPRODUCTION IN PLANTS

QUESTIONS:

Q.1.Fill in the blanks:

- a) The new individuals which are produced of from the vegetative part of parent is called _____
- b) Either male or female reproductive parts may be present in flowers. Such a flower is called _____
- c) Pollen grains which are transferred to the stigma from the anther of the same or of another flower of the same kind is known as _____
- d) The fusion of male and female gametes is termed as _____
- e) The dispersal of seeds takes place by means of _____ and _____

Ans. (a) vegetative reproduction (b) unisexual flower (c) pollination (d) fertilization (e) wind, water

Q.2. Describe the different methods of asexual reproduction. Give examples.

Ans.

The different methods of asexual reproduction are:

- (a)Binary Fission: Unicellular organisms undergoes this process. Elongation of parent cell takes place and division of two identical daughter cells takes place. Each daughter cell develops into an independent adult.
- (b)Endospore Formation: Endospore is formed in which the spore wall is formed around a bacterial cell. Under favourable conditions, this endospore germinates to form an active bacterium.
- (c)Fr
Augmentation: It is a process in which the body of the organism splits into two parts. A new filament is formed from each part thus forming two organisms from a single organism.
- (d)Spore formation: Spores which are tiny spherical unicellular structures which are protected by a thick wall. The spores are stored in a hard outer covering and this is called sporangium. The hardcover breaks and spores spread for germination under favourable conditions.
- (e)Budding: In yeast, new organisms are produced by bud formation from the parent organism. After attaining its full size, the bud gets detached and forms a new independent individual.
- (f)Vegetative propagation: When vegetative parts of a plant like stems, leaves, and root etc., gives rise to new ones, then it is called vegetative propagation.

Q.3.Explain what you understand by sexual reproduction.

Ans. The process of reproduction involving two parents is called sexual reproduction. The male gamete and female gamete fuse to form a zygote which mainly takes place in higher plants. Individuals which are formed from this zygote are not identical to each other. The characteristics of both the parent are inherited to the offspring. After the process of sexual reproduction both the parents survive.

Q.4.State the main difference between asexual and sexual reproduction.

Ans.

Asexual reproduction

Sexual reproduction

(a)Involvement of only one parent plant takes place.

(a)Involvement of both male and female parents takes place

(b)Takes place only in unisexual plants.

(c) Occurs in lower plants.

(d) Reproductive organs are absent.

(e) Original parent disappears in most of the method.

(f) Gamete formation or fertilization does not take place.

(g) Characteristic of only one parent is inherited.

(h) Seeds are not needed.

(b) Takes place only in bisexual plants.

(c) Occurs in higher plants.

(d) Reproductive organs are present which are fully developed.

(e) After the process of reproduction original parts remain alive.

(f) Gamete fertilization gives rise to zygote.

(g) Both the parents' characteristics are inherited.

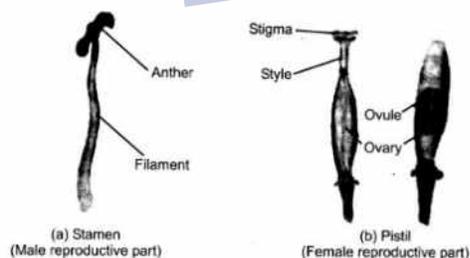
(h) Seeds are needed to get new plants.

Q.5. Explain the different between self-pollination and cross-pollination.

Ans.

Self-Pollination	Cross-pollination
(a) Transfer of pollen grains to the stigma of the same flower takes place.	(a) Transfer of pollen grains to the stigma of other flower takes place.
(b) Takes place in bisexual plants in which anther and stigma mature at the same time.	(b) Takes place in bisexual plants in which anther and stigma mature at different times.
(c) It occurs in plants like wheat, peas etc.	(c) It occurs in plants like ladyfinger, tomato, brinjal etc.

Q.6. Sketch the reproductive parts of a flower.



Q.7. Describe the various ways by which seeds are dispersed.

Ans. The various ways in which seeds are dispersed are:

- (i) The hairy, dry and small seeds like that of madar are carried away by the wind to different places.
- (ii) The seeds are carried away by sticking on the animals and flies which are spiny like that of Xanthium.
- (iii) Heavy plant seeds like that of coconut are dispersed by water which acts as a dispersing agent.
- (iv) The seeds are dispersed by fruit bursts like in the case of balsam and castor.

Q.8. How does the process of fertilization take place in flowers?

Ans. The pollen tube of the stigma starts to grow when the pollen grain reaches the stigma and it continues to grow inside the style till it reaches the ovule. When it reaches the ovule the male cells are released and fertilization with female egg cell takes place and

zygote is formed. The ovule develops into seed and the ovary into fruit after fertilization.

Q.9. Match items in column I with those in column II

Column I	Column II
(a) Bud (b) Eyes (c) Fragmentation (d) wings (e) Spores	(i) Maple (ii) Spirogyra (iii) Yeast (iv) Bread mold (v) Potato (vi) Rose

Ans.

Column I	Column II
(a) Bud (b) Eyes (c) Fragmentation (d) Wings (e) Spores	(iii) Yeast (v) Potato (ii) Spirogyra (i) Maple (iv) Bread mold

Q.10. Tick the correct answer:

(i) The reproduction part of a plant is the

(a) leaf (b) stem (c) root (d) flower

(ii) The process of fusion of the male and the female gametes is called

(a) fertilization (b) pollination (c) reproduction (d) seed formation

(iii) Mature ovary forms the

(a) Seed (b) Stamen (c) pistil (d) fruit

(iv) A spore production plant is

(a) rose (b) bread mold (c) potato (d) ginger

(v) Bryophyllum can be reproduced by its

(a) stem (b) leaves (c) roots (d) flower

Ans. (i) d. flower, (ii) a. fertilization, (iii) d. fruit, (iv) b. bread mold, (v) b. leaves