

NCERT solution for Reproduction in Plants

Science

Question 1

Fill in the blanks:

- (a) Production of new individuals from the vegetative part of parent is called _____.
- (b) A flower may have either male or female reproductive parts. Such a flower is called _____.
- (c) The transfer of pollen grains from the anther to the stigma 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) Seed dispersal takes place by means of _____, _____ and _____.

Answer

- (a) vegetative propagation.
- (b) unisexual.
- (c) pollination.
- (d) fertilization.
- (e) wind, water and animals.

Question 2

Describe the different methods of asexual reproduction. Give examples.

Answer

Different methods of asexual reproduction:

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Vegetative propagation	In this mode of reproduction, new plants are produced from vegetative part of mother part of the plants like roots, stems, leaves and buds of individual plant. Examples: Stem cutting in Champa, eye growth in potatoes etc.
Spore Formation	This reproduction is done by spores which under favorable condition germinates and develops into a new individual. Examples: Moss and ferns.
Fragmentation	In this mode of reproduction, parent body breaks down into two or more fragments. Each pieces grow into new individuals when water and nutrients are available. Example: Algae
Budding	The bud is a small projection which gradually grows and gets detached from the parent cell and forms a new yeast cell. The new yeast cell grows, matures and produces more yeast cells. example: Yeast. Sometimes a chain of buds is also formed

Question 3

Explain what you understand by sexual reproduction.

Answer

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In Sexual reproduction, two parents are involved for the production of new generation. The reproduction is done by male and female gametes. The stigma contains the male parts in which pollen grains are formed and pistil consists of stigma, style and ovary which contains the female parts. Most of the plants reproduce sexually with the help of flowers and seeds.

Question 4

State the main difference between asexual and sexual reproduction.

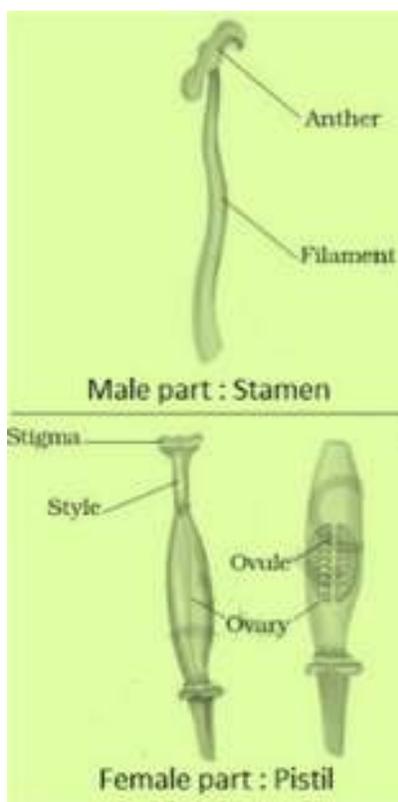
Answer

Asexual Reproduction	Sexual reproduction
(i) One parent is involved.	(i) Two parents are involved.
(ii) New generation is identical or true copy of their parent.	(ii) New born are similar to their parents.
(iii) It doesn't require the formation of gametes.	(iii) It requires the formation of gametes.
(iv) Special organs for reproduction are not required.	(iv) Special organs for reproduction are required.
(v) Examples: Potato, Jasmine, Rose, Yeast, Bryophyllum etc.	(v) Examples: Mangoes, coconut, Hibiscus etc.

Question 5

Sketch the reproductive parts of a flower.

Answer



Question 6

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

Answer

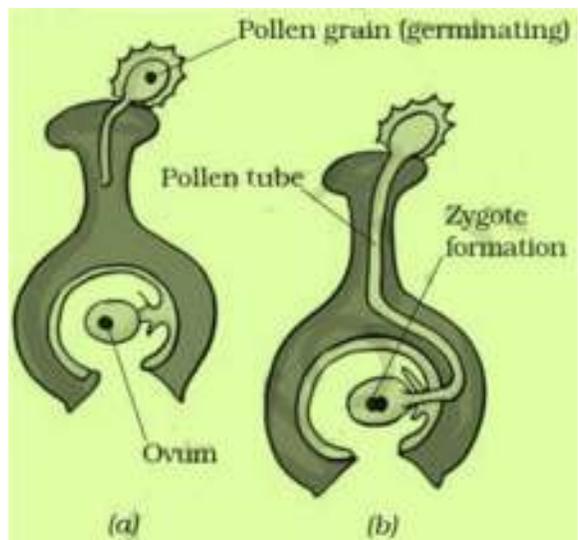
Self pollination	Cross Pollination
(i) Transfer of pollen from the stamen to the pistil of the same flower.	(i) Transfer of pollen from the stamen of one flower to the pistil of another flower of the same plant or different plants of the same kind.
(ii) External medium is not required.	(ii) External medium is required.
(iii) It occurs only in bisexual flower.	(iii) It occurs in both unisexual and bisexual flowers.

Question 7

How does the process of fertilization take place in flowers?

Answer

Fertilization is the process in which male and female gametes fuse together. In flowering plants, the pollen fuses with ovules present in the ovary to form a zygote, which later on develops into seed.



Question 8

Describe the various ways by which seeds are dispersed.

Answer

Various agents by which seeds are dispersed are:

<p>Wind</p>	<p>Light seeds or hairy seeds and hairy fruit get blown off with the wind to faraway places. Examples: Sunflower, maple, drumsticks etc.</p>
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water	Fruits or seeds which develop floating ability in the form of spongy or fibrous outer coat are carried away with to different places. Example: Coconut.
Animals or birds	Seeds like xanthium have spines which help them to stick to fur or skin of the animals. Some seeds eaten by birds and animals along with fruit pass out unharmed in waste. They germinate where they fall.
Bursting	Some seeds are dispersed when the fruits burst with sudden jerks and the seeds are scattered far from the parent plant. Examples: castor and balsam.

Question 9

Match items in Column I with those in Column II:

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

-	(vi) Rose
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Answer

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

Question 10

Tick (✓) the correct answer:

(a) The reproductive part of a plant is the

- (i) leaf
- (ii) stem
- (iii) root
- (iv) flower

Answer

(iv) flower

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

- (i) fertilization
- (ii) pollination
- (iii) reproduction

(iv) seed formation

Answer

(i) fertilization

(c) Mature ovary forms the

(i) seed

(ii) stamen

(iii) pistil

(iv) fruit

Answer

(iv) fruit

(d) A spore producing plant is

(i) rose

(ii) bread mould

(iii) potato

(iv) ginger

Answer

(ii) bread mould

(e) Bryophyllum can reproduce by its

(i) stem

(ii) leaves

(iii) roots

(iv) flower

Answer

(ii) leaves