

fertilization, i.e., the union of sperms and eggs from different flowers.

~~seed bearing structure which is the~~

Q

13.5.21

Mca

i) In a germinating seed the roots develop from:-

ans. a) Radicle

ii) In a germinating seed, the shoot develops from -

ans. b) Plumule

c) Which one of the following is monocotyledonous seed

ans. d) Maize

iv) If the cotyledons are pushed above the soil, then such type of germination is called -

ans. e) Epigeal

v) If the cotyledons remain under the soil, then such type of germination is called -

ans. f) Hypogeal

vi) Pollen is produced in the

ans. g) Anther.

vii) Reproductive whorl of a flower are -

ans (a) Stamen

viii) Which one of the following is a false ^{fruit} ~~seed~~?

ans (b) Apple

ix) In a seed food is generally stored in -

ans (d) Cotyledons and endosperms.

2. a) A seed which shows hypogeal germination - Pea

b) A monocot seed - Maize grain

c) A dicot seed - Bean seed

d) A seed which shows epigeal germination -

Bean seed

3. c) Radicle and plumule -

ans. The radicle develops into a root, while the plumule

develops into a shoot.

b) Hilum and micropyle.

ans. Hilum is the inner concave side of the seed, where the seed was attached to fruit wall. Micropyle is a small pore which absorbs and allows water required for germination.

c) Testa and tegmen.

Testa is the outer exposed part of the seed coat, whereas tegmen is a thin membrane and lies under testa, it is the inner part of the seed coat.

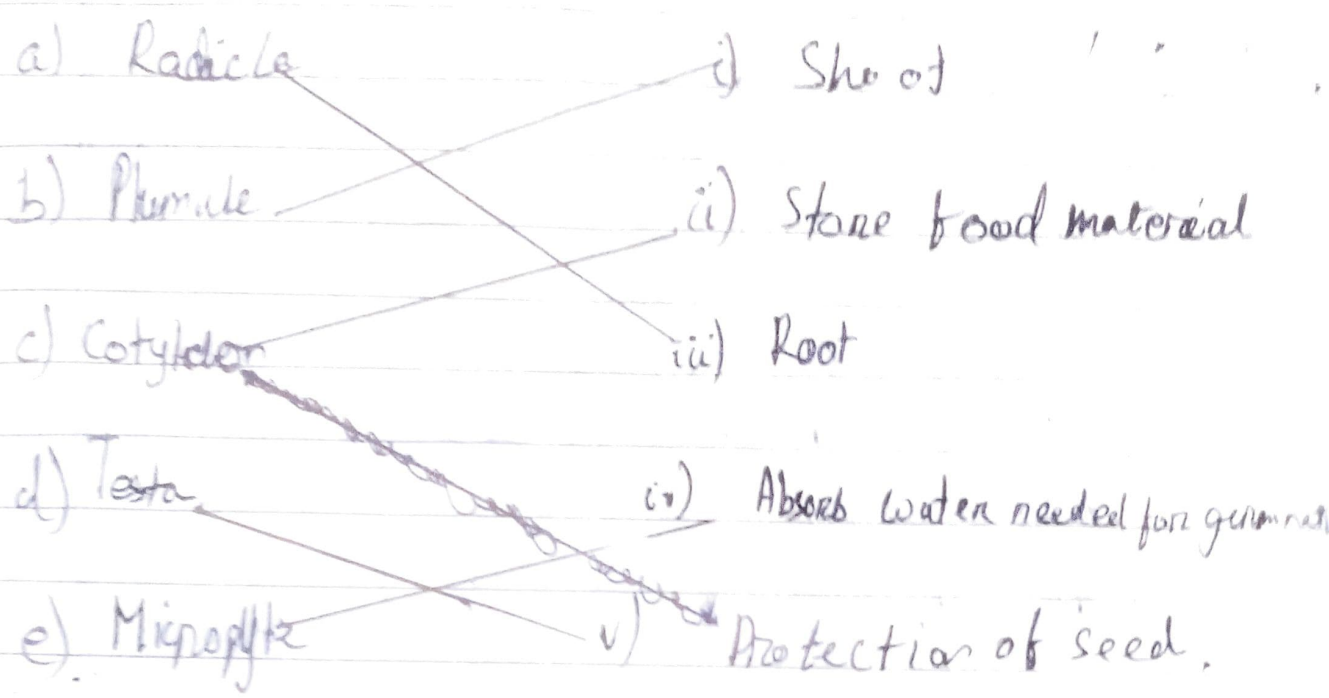
4. Give two functions of a fruit

ans) (i) It protects the seed from the unfavorable environmental conditions.

(ii) Fruits store food inside them.

5 Column-A

Column-B



6 Radicle emerges out of the seed earlier than plumule. What one advantage served by this.

ans Radicle comes out of the seed earlier than the plumule has advantages as it gets water and minerals from the soil and gives it to the growing plumule.

7 a) Some seeds have no cotyledons. False

b) Warmth is necessary for germination of seeds.

True.

c) All seeds have two cotyledons. False

d) Oxygen is necessary for the germination of seeds.

8. a) Radicle - Form the root

b) cotyledons - On removing ~~the~~ testa and ~~and~~ the tegmen from a soaked bean seed, you will find that the seed is made up of two fleshy leaves called the cotyledons. They contain stored food material which is used by the seedling for growth.

c) Endosperms - Ovary forms the fruit.

d) Micropyle - Above the hilum is a small pore called micropyle (Micro = small, pyle = passage). The micropyle absorbs and allows as much water as is required for germination.

9. The three conditions necessary for germination are -

ans. a) Oxygen, suitable ^{temperature} ~~condition~~ and water

10. a) Root - Radicle give rise to roots

b) Leaves - Plumule gives rise to shoot bearing ~~parts~~ leaves

Long Answer Questions. (Write the answers in your note-book)

Q.1. What is meant by pollination? Name two types of pollination.

ans. Pollination is the transfer of pollen grains from the anther to the stigma of flower.

The two types of pollination are -

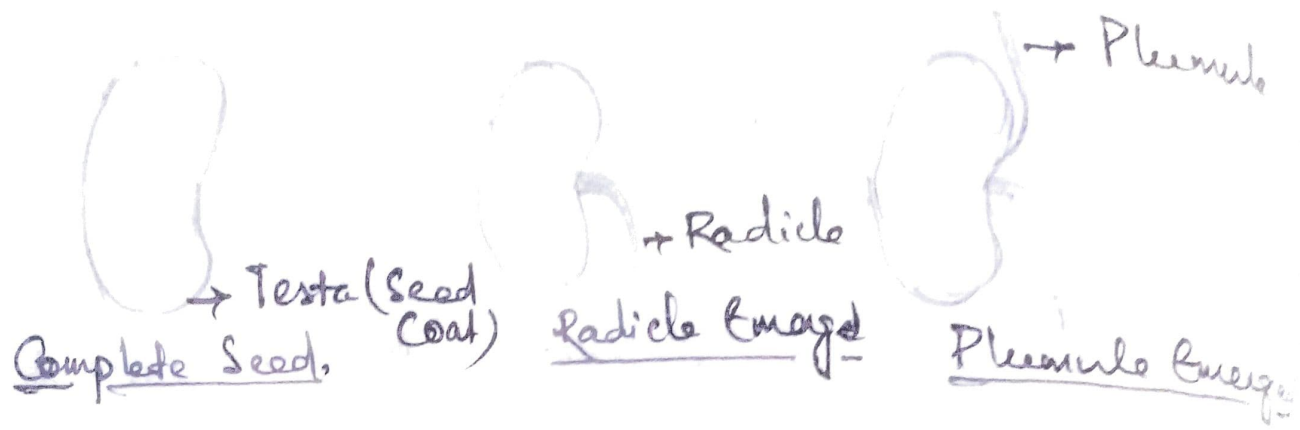
- Self pollination - It occurs within a single flower or between the flowers of same plant.
- Cross pollination - It occurs in flowers of different plants of same kind.

Q.8. State the location of the following in a flower.

- ans a) Stamens - Stamens are the green outer most part of a flower.
- b) Petal - This forms the second inner whorl.

Petals are the large fragrant and brightly coloured parts of the flower.

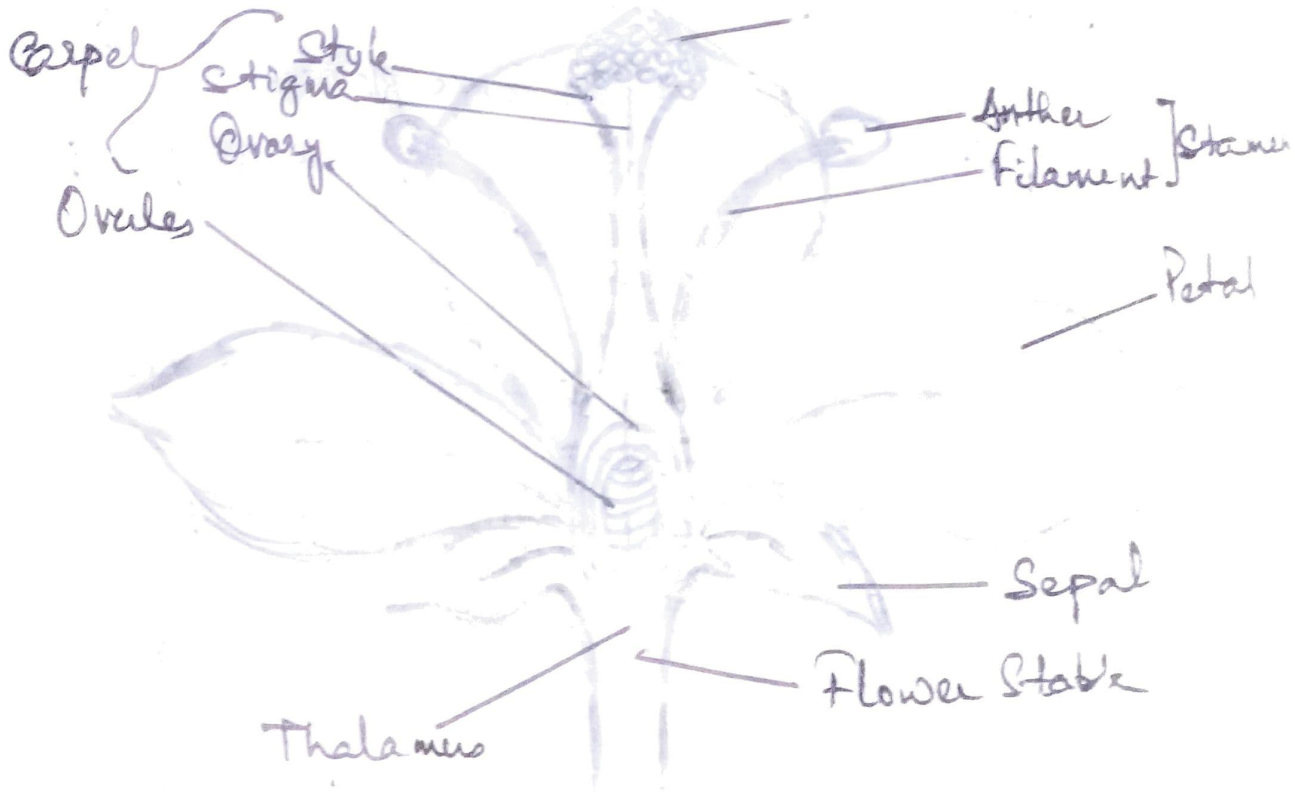
Q. 11



Long Answer

Q.3. What is a flower? Draw a typical flower and label its different parts?

Ans: A flower is the most beautiful and colourful part of a plant which serves as a reproductive organ.



c) Anthers - It is located in the third whorl of the flower. The filament of the stamen bears the anther at its tip.

d) Stigma - It is located in the fourth and the innermost whorl of the flower. The style bears the stigma at its tip.

Q. 10 Give the difference in the function between the following parts.

(a)	<u>Ovary</u>	<u>Ovule</u>
	It is the female reproductive part of a flower.	Ovule is located inside the ovary.
	After fertilization the ovary turns into a fruit.	Ovule turns into a seed after fertilization.

(b)	<u>Petal</u>	<u>Sepal</u>
	Petal is present in the second whorl of the flower.	It is the outermost whorl of a flower.
	Petals are usually colored or white but never green. It makes the flower attractive and attracts the insects for pollination.	Sepals are green leaf-like structures. They enclose the inner part of the flower to provide necessary protection to growing bud.

c) Filament

Filament is a thread like structure which bears the anther at its tip.

Style

Style bears an expanded stigma at its tip and transfers the male gamete of the pollen grain into the ovary.

d) Pollen

The function of pollen is to deliver male gametes (sperm) from stamens of a plant to an ovule, when fertilized.

Ovule

Ovule, when fertilized, will develop into a seed. It is a female reproductive cell.