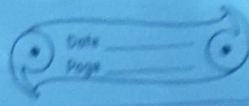


The flower

MCQ



1) a) In a germination seed, the roots develop from:

i) Radicle

~~b)~~ b) In a germination seed, the shoot develops from:

ii) Plumule

c) Which ^{one} of these ~~are~~ is a monocotyledonous seed?

iii) Maize

d) If the cotyledons are pushed ~~out~~ above the soil then such type of germination

^{is} called: Epigeal ^{ion}

f) Pollen is produced in the:
Anther

g) Reproductive whorls of a flower
are:

i) Stamens and carpels

h) Which one of the following is
a ~~is~~ false fruit? Apple

i) In a seed, food is generally
stored ~~in~~ in: Cotyledons and
endosperm ~~ms~~

~~The flower~~

- i) Testa: It is the outer exposed part of the seed.
- ii) Plumule: It is located between the two cotyledons and develops into a shoot.
- iii) Radicle - It is located between ~~two~~ the two cotyledons and develops into a root.

iv) Microphyle - It absorbs
and allows the entry
of as much as water
as is
required for germination.

v) Cotyledon: It ~~also~~ stores
the food material which
is used by the ~~the~~ seedling
for growth.

4) ~~the~~ ~~the~~ Give two functions
of fruit.

Ans) ~~the~~ the two functions
of fruit are

- i) It protects the seed from the unfavourable environmental conditions.
- ii) Fruits store food inside them.

Long ans questions:

- 1) Ans) ~~is~~ Pollination is the transfer of pollen grains from the anthers to the stigma of a ~~flower~~ flower.
- i) Self pollination: It occurs within a single flower or

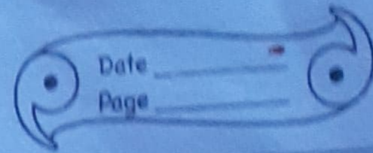
between the flowers of
same ~~flower~~ plant

b) **Cross** pollination: It
occurs in flowers
of different ~~of~~ plants
of same kind.

2) Ans) If all the seeds produced by a plant happen to fall under the same plant and sprout into new plants, then the following ~~for~~ problems will happen

a) As a large number of plants will grow in a very small area, the water and minerals available for the plants will be very limited.

b) The air and sunshine for



them will be not enough.
As a result most of the sprout
will die.

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

4) Ans) The ~~beans~~ seed is an ex of dicot seed. Whose diagram is below.

The green outermost covering of the seed is called Seed Coat. It protects the seed from insects and bacteria as well as from mechanical injury. The ~~seed~~ seed coat ~~is~~ again made up of two parts. The outer exposed

part is called the testa and the inner part is called tegmen. A scar called hilum is present in the inner concave side of the seed. This is the place where the seed is attached to the fruit. Above the hilum there is a small pore called micropyle, it absorbs and allow the entry of ~~water~~ water required ~~from~~ for germination. The seed is made up of two

food materials which is used by the seedling for growth.

In between the two cotyledons a delicate embryo is located which is consist of radicle and plumule. The radicle develops into a root and the plumule develops into a shoot.

9) Ans) The process by which the ~~embryo~~ embryo in the ~~seed~~ seed becomes active in the presence of water, air and suitable temperature and grows into a young plant is called germination. The two types of germination are epigeal germination and hypogeal germination.

Epigeal germination the type of germination in which the cotyledons are pushed above

the soil is called epigeal germination. The leaves unfold and start preparing food for the growing plant.

Example - Bean seed

Hypogeal germination The type of germination in which the cotyledons remains below the ground is called hypogeal germination.

The plumule only comes out of the soil to form leaves.

Example - Pea seed, Maize grain

6) And Water, air and favourable temperature are the three conditions ~~reqd~~ required for the germination of ~~the~~ seeds.

7) Hypogeal germination

• Cotyledons remain below the ground.

• Epicotyl elongates faster than hypocotyl, hence

hypocotyl, hence

Epigeal

Germination

Cotyledons are pushed above the ground.

Hypocotyl elongates faster than epicotyl, hence

hypocotyl, hence cotyledons

cotyledons ~~stay~~ get pulled
remain below. above.

- Ex - Maize, rice, Esc - Bean, tamarind,
ground nut papaya, cucumber

Extra questions and
and answers

g) a) ~~Sepals~~ - Sepals are green outermost part of a flower.

b) Petals - This forms the second inner whorl.

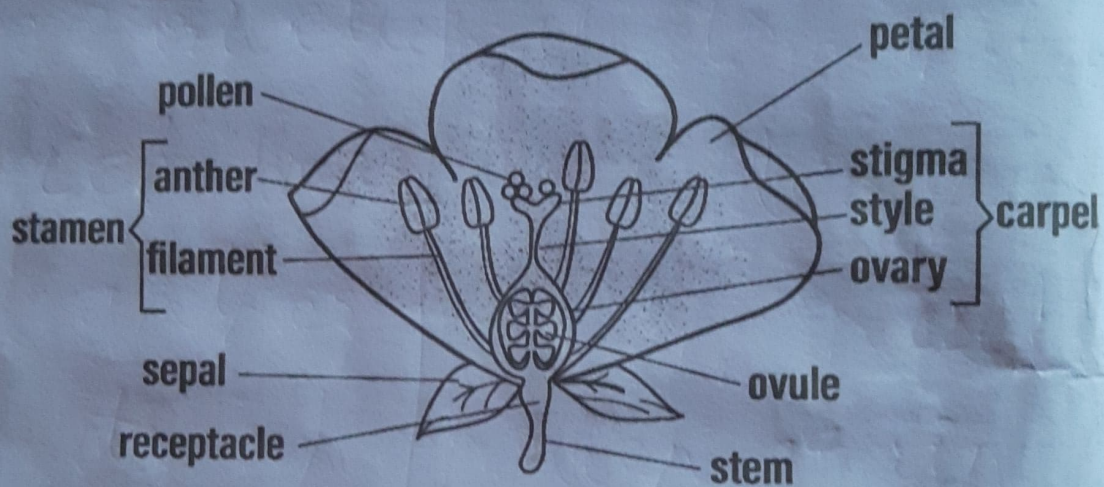
Petals are the large, fragrant and brightly coloured parts of the flower.

c) Anthers - It is located in the third whorl of the flower. The filament

of the ~~anther~~ 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.

9)



10) Ans) Ovary and ovule

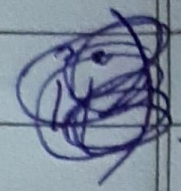
Ovary

It is the female reproductive part of a flower.

Ovule

Ovule is located inside the ovary.

Ovary



~~This is the fer~~

After fertiliza^{tion}
the ovary
turns into
a fruit

Ovule

Ovule turns
into a seed
after ~~B~~
fertilization

Petal and Sepal

Petal

Petal is

present in the outermost whorl
second inner of the flower.

whorl of the
flower.

Sepal

It is the

the
outermost whorl
of the flower.

Petals

Petals are usually coloured or white but not green. It makes the flower attractive and attracts the insects for pollination.

Sepals

Sepals are green like structures. They enclose the inner part of the flower to provide necessary protection to growing bud.

10) Filament and style

Filament

Style

Filament is a thin thread which bears the anther on its tip. Pollen grain enters the style bears an expanded stigma like structure at its top and transmits the male gametes to the ovary.

10d) Pollen grains and ovule

Pollen grains

- Pollen grains contain the male gametes.
- Pollen grains germinate to produce pollen tubes. Which carry the male gametes to the ovary.

Ovule

- Ovule contains the ~~the~~ female gametes.
- After fertilisation the ovule develops into a seed.