

3- Differentiate between the following pairs of terms.

a Radicle and plumule: The radicle develops into a root, while the plumule develops into a shoot.

b Hilum and micropyle: Hilum is the inner concave side of the seed, where the seed was attached to the 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, whereas tegmen is a thin membrane and lies under the testa. It is the inner part of the seed coat.

4- Give two functions of fruit.

Ans- The two functions of fruit are:

- i- It protects the seed from the unfavorable environmental conditions.

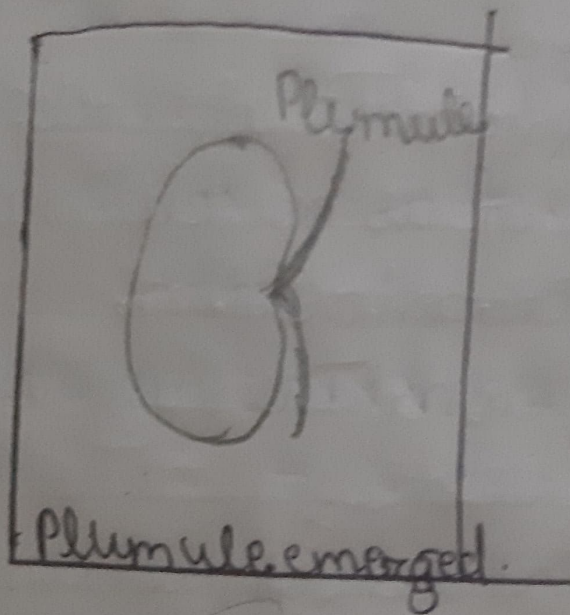
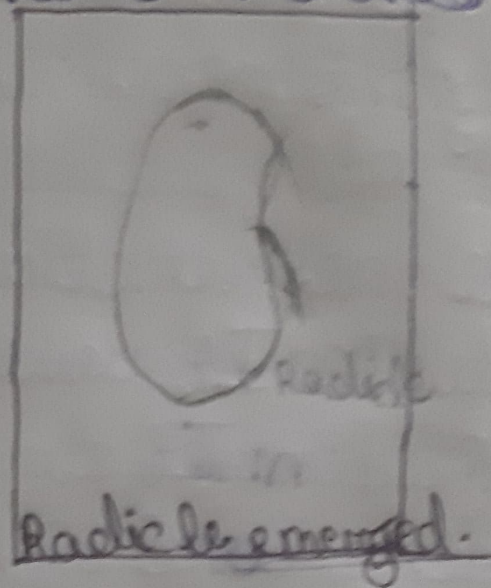
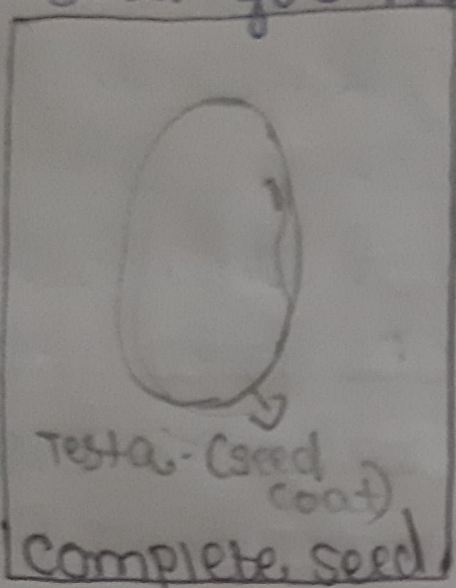
Fruits store food inside
them.

10- Name the part of the seed from which the following are given out:

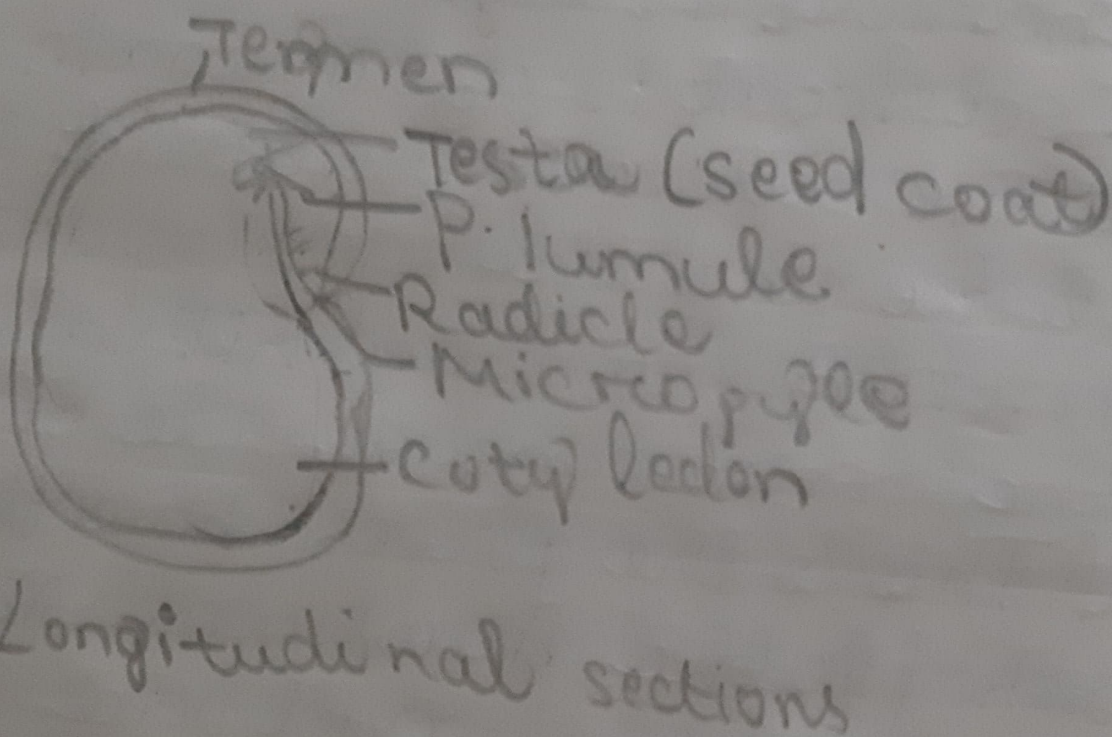
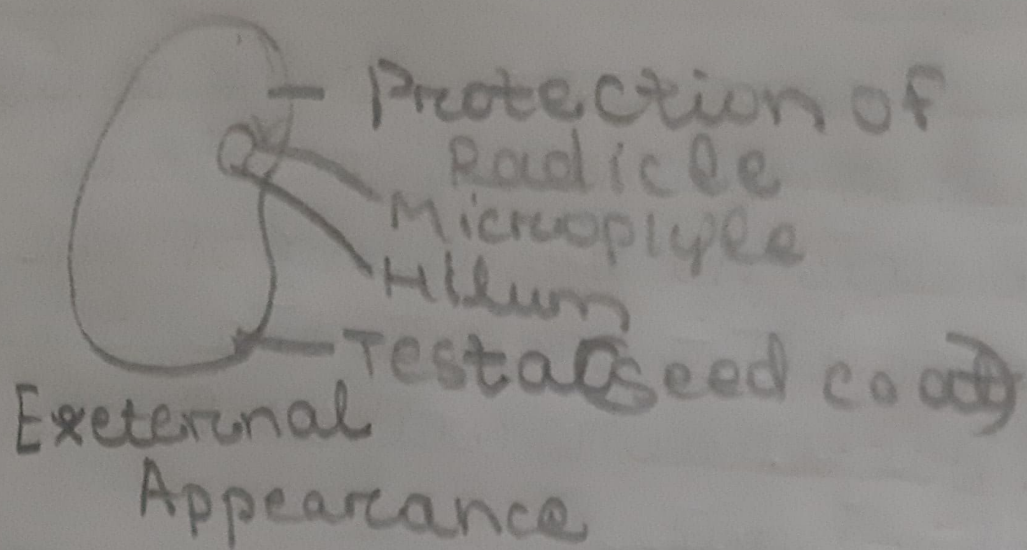
a roots: Radicle

Leaves: Plumule

In the spaces provided below, draw labelled diagrams to show the three stages in the germination of any seed you have observed.



It swells
up & it



4- With the help of a suitable labelled diagram, describe the structure of a dicot seed.

Ans- The bean seed is an example of a dicot seed, whose diagram is shown below.

The green outermost covering of the seed is called the seed ^{coat}. It protects the seed from insects and bacteria as well as from mechanical injury.

The 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 wall. Above the hilum there is a small pore called

micropyle. It absorbs and allows the entry of water required for germination.

The seed is made up of two of two fleshy seed leaves called the cotyledons.

They contain stored food material which is used by the seedling for growth.

In between the two cotyledons a delicate embryo is located, which consists of radicle

and plumule. The radicle develops into a root and the plumule develops into a shoot.

5. Define germination. Name two types of germination. Explain with example.

Ans- The process by which the embryo in the 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 growing plant.

Germination of ^{bean} pea seed and is an