3. Differentiate between the following pairs of terms:

a) Radicle and plumule

Ans- The radical develops into a root, while the plumule develops into a shoot.

b) Hilum and micropyle

Ans- Hilum is the inner concave side of the ~~root~~ seed, where the seed was attached to the fruit wall. Micropyle is a small pore which absorbs water required for germination.

c) Testa and tegmen

Ans- Testa is the outer exposed part of the seed coat, 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 unfavourable environmental conditions.

ii) Fruits store food inside them.

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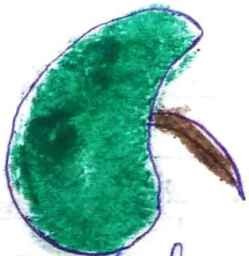
10. Name the part of the seed from which the following are given out:

a) Roots: Roots are given out by the radicle of the seed. Radicle is an embryonic root, which absorbs water and minerals for the development of plant and then grows into a root.

b) Leaves: Plumule gives out the shoot with the leaves.

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

Complete seed



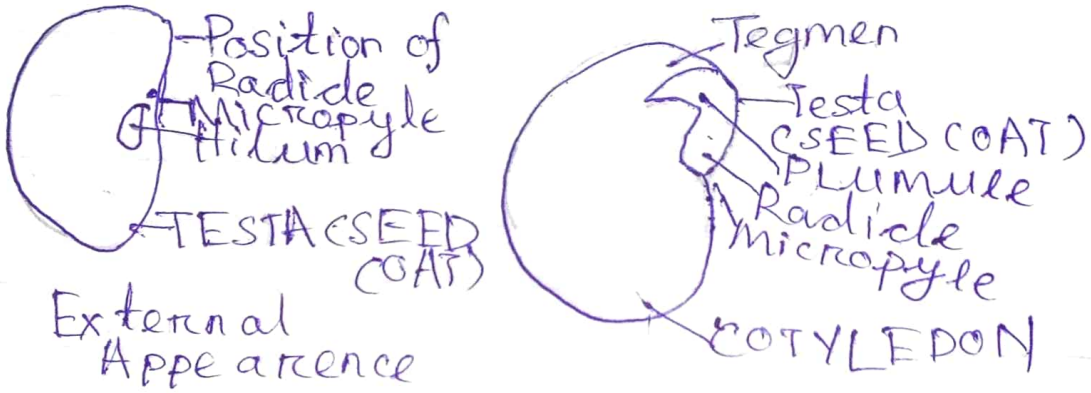
Radicle emerged

Plumule emerged

Bean Seed

Long Answer questions.

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



Structure of bean seed

Bean seed is a dicotyledonous seed. It is protected by a greenish outer covering called seed coat, which protects it from harsh sunlight and water. The seed coat has two parts. The testa is the outer green part of the

seed coat. The tegmen is a thin membrane which lies under the testa. On the inner concave side of the seed, a scar called hilum is present, which represents the mark where the seed was attached to the fruit. Just above the hilum, is a small hole called micropyle (micro: small, pyle: passage). Micropyle is a small passage from which the water enters. Micropyle allows adequate amount of water to enter in. The bean seed has no endosperm for nourishment. The cotyledons help in nourishment of the seed. They store food and water inside them for the growth of seeding. In between the cotyledons, the embryo is present. The embryo consists of a radicle or embryonic root, plumule or epicotyl or embryonic shoot and hypocotyl.