

Short Answer Type Questions-I

Q. 1. Distinguish between fibrous root and adventitious root.

Ans.

S. No	Fibrous Root	Adventitious Root
(i)	It originates from the base of the stem. The primary root is short lived and is replaced by large number of roots.	It develops from the parts of a plant other than radicle.
(ii)	All mono- cot plants like maize, wheat and sugarcane.	Examples: Banyan tree, <i>Bryophyllum</i> and grass.

Q. 2. Write the main characteristic of stem.

Ans. (i) It bears and supports leaves, flowers and fruits.

(ii) The various appendages borne on the stem are placed in such a fashion that they are able to carry out their functions most effectively.

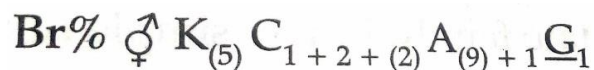
(iii) It conducts water and mineral salts from roots to the leaves and fruits.

(iv) The food manufactured in the leaves is transported to the roots, fruits and organs of storage through the stem.

Q. 3. Write the floral formula of the family fabaceae?

(KVS Guwahati)

Ans. Floral formula for the family fabaceae:



Q. 4. Differentiate between hypogynous and epigynous flowers. Give one example of each.

(KVS 2015)

	Hypogynous flowers	Epigynous flowers
(i)	The Ovary or gynoecium develops at its top while other floral organs are inferior.	The ovary or gynoecium develops below the level of other floral organs.
(ii)	The ovary is said to be superior.	The ovary is said to be inferior.
(iii)	Example: Mustard, china rose, brinjal etc.	Example: Apple, Sunflower, cucumber guava etc.

Q. 5. Differentiate between: (a) Epigynous and Perigynous flower (b) True fruit and false fruit (c) Alternate and Whorled phyllotaxy.

Ans.

S. No	(a) Epigynous flower	Perigynous flower
(i)	The thalamus is cup shaped and is fused with the ovary so that other floral parts rise on the top of the ovary.	The thalamus is a cup shaped structure around the ovary but is not fused and bears sepals, petals and sta-mens.
(ii)	Ovary is inferior. <i>e.g.</i> , Apple, cucumber.	Ovary is half inferior <i>e.g.</i> , Rose.
S. No	(b) True fruit	False fruit
(i)	It develops from the ovary.	It develops from parts other than ovary.
(ii)	No other part is involved in fruit formation.	Thalamus and perianth take part in fruit formation.
(iii)	Example: Pea.	Example: Apple.

Q.6. What do you understand by staminode and pistillode? Differentiate between staminate and pistillate flower.

Ans. (i) Staminode : In *Verbascum* and *Salvia*, some stamens are without pollen grains and are sterile. They are known as staminode.

(ii) Pistillode : A sterile pistil is called pistillode.

Differences between staminate flower and pistillate flower:

S. No.	Staminate flower	Pistillate flower
(i)	In dioecious (unisexual) flowering plants, the male flower is called staminate.	In dioecious (unisexual) flowering plants, the female flower is called pistillate.