

Adventitious roots

Do not arise from  
radicle

Prop roots

Banyan Tree

Stilt roots

Maize and sugarcane

Pneumatophores

*Rhizophora*

Stem modified to  
thorns

*Citrus, Bougainvillea*

Stem performs  
photosynthesis

*Opuntia, Euphorbia*

Offsets

*Pistia, Eichornia*

Sucker

*Chrysanthemum,  
banana, pineapple*

Stolon

Mint

Phyllotaxy

Arrangement of  
leaves on the  
branch

Leaves modified to  
tendrils

Pea

Stem tendrils

Grapevines,  
pumpkin

Racemose

The main axis continues to grow, flowers borne laterally in acropetal succession

Cymose

Flowers are borne terminally on the main axis in the basipetal succession

Actinomorphic ⊕

Radial symmetry  
(Brassicaceae,  
Solanaceae)

Zygomorphic %

Bilateral symmetry  
(Fabaceae)

Hypogynous

Superior ovary G  
(mustard, brinjal)

Perigynous

Half-inferior ovary  
(plum, rose, peach)

Epigynous

Inferior ovary  
(guava, cucumber)

Valvate

Sepals or petals do  
not overlap  
(*Calotropis*)

Twisted

China rose, cotton,  
lady's finger

Imbricate

irregular overlapping  
of petals or sepals  
(*Cassia*, gulmohar)

Vexillary

Presence of keel,  
wings and standard  
(peas and beans)

Polyadelphous  
stamen

Citrus



Free central

*Dianthus, Primrose*

Basal

Sunflower, marigold

Parietal

Mustard, *Argemone*

Axile

China rose, tomato  
and lemon

Marginal

Pea

Drupe

Mango and coconut

Endospermic  
dicotyledonous  
seed

Castor

Dicotyledonous  
seed

Seed coat- outer testa, inner  
tegmen  
hilum- scar  
micropyle- small pore  
two cotyledons

Non-endospermic  
monocotyledonous  
seed

Orchids

Monocotyledonous  
seed

Aleuron (protein layer)-  
separating endosperm from  
embryo  
one cotyledon- scutellum  
plumule enclosed in coleoptile  
radicle enclosed in coleorhiza

Perianth

Liliaceae

Parthenocarpic fruit

Pineapple, Banana