DPP
DAILY PRACTICE PROBLEMS

Class : XIth
Date :

Solutions

Subject : BIOLOGY
DPP No. : 8

Topic :- Morphology of Flowering Plants

1 **(a)**

Cyathium is the characteristic inflorescence of genus-*Euphorbia* (but not of the family-Euphorbiaceae). In cyathium, five involucre becomes fused and form a cup-shaped structure, which bears a large single female flower surrounded by numerous, free male flowers.

2 **(d)**

Sometimes calyx and corolla of the flower are not distinct. The condition is called parianth

3 **(a)**

Below root cap, the area of new cell formation is called **meristematic zone**. Behind meristematic zone is the area of cell enlargement.

Below this zone, the absorption of water and then mineral takes place. This water and mineral absorption come under the **zone of maturation**.

4 **(b)**

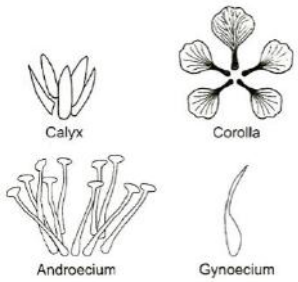
Pomology deals with the study of fruits.

5 **(d)**

Drupe is fleshy, single seeded, indehiscent fruit with the seed enclosed in a stony endocarp, e.g., peach, plum, mango, coconut, etc.

6 **(b)**

Parts of flower



Calyx Outer part of flower which is generally used for the protection of flower. It is sometime fused with the corolla and used for special functions.

Corolla It is the brightly coloured (generally) which is used for the attraction of insect for pollination.

Androecium Male reproductive part containing stamen. In stamen, three are pollen sac which contain pollens.

Gynoecium Female reproductive part which contains stigma, style and ovary

7 **(a)**

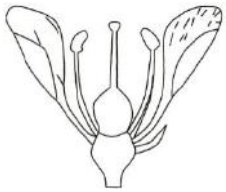
Pisum belongs to family-Fabaceae. In this family, flower is bisexual and zygomorphic; corolla is polypetalous papilionaceous and zygomorphic; corolla is polypetalous papilionaceous and with vexillary aestivation; andriecium is papilionaceous and with vexillary aestivation; androecium is diadelophous with dithecous anther; and gynoecium has monocarpellary, unilocular and superior ovary with marginal placentation having many ovules.

8 **(c)**

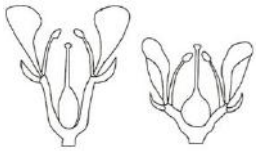
The leaf blades become spinous in *Argemone* (*Papaver*).

9 **(c)**

(i) **Hypogynous flower** Gynoecium occupies its highest position. This is called the superior ovary *e.g.*, mustard, China rose, brinjal

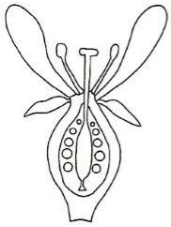


(ii) **Perigynous flower** Gynoecium is situated in the centre and other parts are situated at the same level. This condition is called half inferior ovary. *e.g.*, plum, rose, peach



(iii) **Epigynous flower** The other part lies above the ovary. This condition is called the inferior ovary

e.g., of epigynous ovary cucumber, sunflower



10 **(b)**

Symbols used for floral formula

Br- Bracteate	EBr - Ebracteate
Brl- Bracteolate	EBrl – Ebracteolate
⊕ - Actinomorphic	% - Zygomorphic
⚥ - Perfect or bisexual	N- Necter
♀ – Female	C- Corolla, petals
O - Male	A- Androecium, stamens
K – Calyx, sepal	Std – Staminodes
P – Parianth, tepal	

G – Gynoecium, Carpel

11 **(d)**

Viscum (mistletoe) is a partial stem parasite that grows on silverfer, popular, apple, walnut, oak, etc.

12 **(c)**

Monocotyledons.

Venation The arrangement of veins and the veinlets in the lamina of leaf is termed as venation. When the veinlets form a network, the venation is termed as reticulate. When the veins run parallel to each other within a lamina the venation is termed as parallel. Leaves of dicotyledonous plants generally possess reticulate venation, while parallel venation is the characteristic of most monocotyledons in reticulate venation vein form network

13 **(b)**

Racemose.

Inflorescence

Depending on whether the apex gets converted into flower or continues to grow

Racemose	Cymose
Main axis continues to grow flower grow laterally, *e.g.*, radish, mustard	The main axis terminates in flower hence limited growth, *e.g.*, jasmine, *Calotropis*

14 **(d)**

The mode of arrangement of sepals or petals in floral bud with respect to the other members of the same whorl is known as aestivation. The main types of aestivation are valvate, twisted, imbricate and vexillary.

In valvate, sepals or petals just touch one another at the margin, without overlapping, *e.g.*, *Calotropis*.

In twisted, one margin of sepal or petal overlaps that of the next one and so on, e.g., China rose, lady's finger, cottons, etc.

In imbricate, The margins of sepal or petals overlap one another but not in any particular direction, *e.g.*, *Cassia*, Goldmohur.

In vexillary, the largest posterior petal (vexillum or standard) overlaps two lateral petals (alae or wings) which in turn overlaps the two smallest, anterior but united petals (keel or carina), *e.g.*, pea, bean etc.

15 **(b)**

Corolla is composed of petals. Petals are usually brightly coloured to attract insects for pollination.

Like calyx, corolla may be free (Polypetalous) or united (gamopetalous). The shape and colour of corolla vary greatly in plants. Corolla may be tubular, bell-shaped, funnel-shaped or wheel-shaped

16 **(c)**

The fruit of apple is known as **pome**. It is a false fruit because it is developed by fleshy

thalamus, which is also its edible part.

17 **(c)**

Tuberous roots are food storing adventitious roots. These arise from germinating seed other then radical. Structurally, these are thick and fleshy without any definite shape, (*i.e.*, irregularly swollen), *e.g.*, *Ipomoea batatas*.

18 **(a)**

In family-Compositae or Asteraceae, inflorescence is head or **capitulum**.

19 **(d)**

The floating roots are swollen spongy and have large aerenchyma. They provide buoyancy to the plant and are also respiratory in function. These are found in *Jussiaea*, *Utricularia*, etc.

20 **(d)**

Floral characters of Malvaceae family; bracteate or ebracteate, pedicellate, hermaphrodite, complete, hypogynous, actinomorphic, pentamerous.

ANSWER-KEY										
Q.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
A.	**A**	**D**	**A**	**B**	**D**	**B**	**A**	**C**	**C**	**B**
Q.	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
A.	**D**	**C**	**B**	**D**	**B**	**C**	**C**	**A**	**D**	**D**