

Topic :- Morphology of Flowering Plants

- 1 **(a)**
The feathery stigma is called plumose. It is found in grasses, family-Gramineae Poaceae. These plants are wind pollinated, because feathery stigma easily trap air-borne pollen grains.
- 2 **(b)**
Simple fruit is developed from an unicarpellary or multicarpellary and syncarpous ovary.
- 3 **(b)**
Phyllode is the modification of leaf. It is an expanded petiole resembling and having the function of a leaf, *e.g., Parkinsonia*.
- 4 **(c)**
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
- 5 **(c)**
Protein.
The outer covering of endosperm separates the embryo by a proteinous layer called the aleurone layer. The cells of aleurone layer have thick walls and dense cytoplasm filled with aleurone or protein grains. The latter produce enzymes during the process of grain germination
- 6 **(a)**
Member of Solanaceae are usually herbs or shrubs. Flowers are hypogynous with five petals and gamopetalous. Androecium has five stamens and is polyandrous epipetalous.
- 7 **(d)**
Euphorbia - Cyathium
Ficus - Hypanthodium
Dorstenia - Coenanthium
- 8 **(c)**
Most of the cereales belong to family-Poaceae (Gramineae). It is most widely distributed family containing nearly 600 genera and 10,000 species.
- 9 **(d)**

Leguminosae family is also called Fabaceae family. The floral formula is

$\% \overset{\text{♂}}{K}_{(5)} \overset{\text{♀}}{C}_{1+2+(2)} A_{(9+1)} \underline{G}_1$

10 **(b)**

The function of obturator on micropyle is to direct the growth of pollen tube.

11 **(c)**

In family-Gramineae (or Poaceae), the perianth is represented by membranous scales called lodicules. The lodicules are situated above and apposite the superior palea.

12 **(b)**

Radish (*Raphanus sativus*) is a modified tap root. For storage of food, it becomes fusiform with swollen portion in the middle and gradually tapering towards the two ends.

13 **(d)**

Most of the dicots have fleshy cotyledons from which the embryo takes food

14 **(c)**

Solanaceae is large family containing 90 genera over 20000 species. It is also called 'potato family'. It is widely distributed in tropics, subtropics and even in temperate zones

15 **(c)**

The epipetalous or epiphyllous condition of a gynoecium is represented by an arc which joins androecium with the corolla or perianth as in the case of $\overset{\text{C}}{\text{A}}$ or $\text{PA} \overset{\text{P}}{\text{A}}$

16 **(d)**

Rhizomes are mostly horizontal or straggling, e.g., ginger, turmeric, lotus, etc, or may be vertical as in *Canna*, sugarcane, *Alocasia*, vertical rhizome is also called **root-stock**.

17 **(c)**

Heterophylly is the phenomenon in which morphologically dissimilar leaves are produced on the same plant body. Many aquatic plants, e.g., *Ranunculus sceleratus* produce very much dissected submerged leaves with simple and entire floating leaves at the same time on the same plant body.

18 **(a)**

Most of the economically important fibre yielding plants belongs to family-Malvaceae (e.g., *Gossypium*, *Hibiscus*, *Cannabini*, *Abutilon theophrasti*, *Abelmoschus esculentus*, *Hibiscus subdariffa*, *Urena lobata*, etc).

19 **(a)**

Spadix is a spike with thick and fleshy axis covered by one or more large bracts, e.g., maize, banana, *Colocasia*. It is found in monocots only.

20 **(a)**

When the stem is flattened and functions as leaf, it is called phylloclade, i.e., it is green, photosynthetic succulent stem of indefinite growth, e.g., *Opuntia*, *Ruscus*, *Lemna*, etc.

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

PE