

Topic :- Morphology of Flowering Plants

- 1 (d)
G₍₂₎ Represents gynoecium, bicarpellary, syncarpous and superior
- 2 (a)
Potato is a stem tuber, which is a swollen, underground stem modification developed at the growing tip of a branch. It possesses number of spirally arranged depressions called eyes, which represent the nodes and contain buds.
- 3 (d)
Non-endospermic (example, albuminous) seeds do not possess endosperm and store their food material in cotyledons, e.g., bean (*Dolichos lablab*), Pea (*Pisum sativum*), etc.
- 4 (d)
Respiratory roots or **pneumatophores** are special, negatively geotropic root branches meant for gaseous exchange or respiration. These are found in some vascular plants growing in the water of tidal swamps, e.g., **mangrove** plants (*Rhizophora*) or halophytic plants.
- 5 (a)
Appendages of some fruits and seed act as a parachute, due to which fruits and seeds remain in the air for a longer period and disperse at a good distance.
- 6 (d)
In mango and coconut, the fruit is known as a drupe. In mango the pericarp is well differentiated into an outer thin pericarp, a middle fleshy edible mesocarp and an inner stony hard endocarp. In coconut which is also a drupe, the mesocarp is fibrous
- 7 (d)
In both *Dahlia* and *Asparagus*, fasciculated roots are present. The swollen tuberous roots occur in clusters are called **fasciculated roots**.
- 8 (a)
Mango belongs to family-Anacardiaceae, sunflower to Asteraceae (Compositae), orange to Rutaceae, wheat to Poaceae (Gramineae), while cotton (*Gossypium*) belongs to Malvaceae.
- 9 (a)
Carthamus tinctorius (kasum) belongs to Family-Compositae. This is a shrub. It's flowers are used as dye for dying food and cloth.
- 10 (a)
Aggregate fruit is formed from a single flower, in which gynoecium is apocarpous.
- 11 (b)
The term involucre is used for any leaf-like structure (including a ring of bracts)

- protecting the reproductive structures.
- 12 **(d)**
Fibrous root system (surface feeder tap root system) represents the tap root, which does not elongate deep into the soil and its fibrous secondary roots mostly horizontally to a greater extent near to the soil surface. This fibrous root system is excellent for providing good anchorage for the plant.
- 13 **(c)**
The given floral diagram belongs to **Asteraceae** (Compositae) family. The floral formula of this floral diagram is the following

$$\text{Br, } \oplus, \overset{\curvearrowright}{\underset{\curvearrowleft}{\text{K}}}_{\text{pappus}} \text{C}_{(5)} \text{A}_{(5)}, \text{G}_{(2)}$$
- 14 **(b)**
They are one internode long small runners, which are found in rosette plants at the ground or water land, *e.g.*, *Pistia* (water lettuce), *Eichhornia* (water hyacinth)
- 15 **(b)**
Most of the cereals belongs to family-Poaceae (gramineae). It is most widely distributed family containing nearly 600 genera and 10,000 species
- 16 **(d)**
Mango is a drupe fruit and its edible part is mesocarp.
- 17 **(b)**
The pericarp, placenta and seed of the tomato fruit are edible.
- 18 **(d)**
Banana is a parthenocarpic berry (seedless berry) formed due to fusion of Epicarp with thalamus to form skin (exocarp) which is not edible and both mesocarp and endocarp are edible.
- 19 **(d)**
Sorosis is a multiple fruit developing from spike or spadix, flowers fuse together by their succulent calyx and the axis bearing them grows and becomes fleshy or woody and the whole inflorescence becomes a compact mass, *e.g.*, pineapple, jackfruit, mulberry.
- 20 **(b)**
If gynoecium is situated in the centre and other parts of the flower are located on the rim of the thalamus almost at the same level, it is called perigynous flower, the ovary here is said to be half inferior, *e.g.*, plum, rose, peach.

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