DPP
DAILY PRACTICE PROBLEMS

Class : XIth
Date :

Solutions

Subject : BIOLOGY
DPP No. : 7

Topic :- Morphology of Flowering Plants

1 **(b)**

In *Amorphophallus* (element foot), buds present on corm give rise to new aerial shoots and new corm.

2 **(d)**

Flowers, in which only one set of essential organ (male or female) is present are called unisexual.

3 **(b)**

Trapa natans is a hydrophyte. It has **monarch** (one xylem strand) condition in slender root and spongy petioles.

4 **(d)**

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*

5 **(d)**

Perianth is of six tepals in two whorls of three each (3+3). They are free or united (*e.g.*, *Allium*). The perianth segments are usually petaloid and the two whorls are generally undifferentiated into calyx and corolla.

6 **(d)**

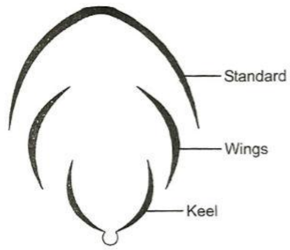
Wheat has the inflorescence called compound spikelet.

7 **(a)**

Haustoria or parasitic roots are adventitious roots, which penetrate the host to suck nutrition, *e.g.*, *Cuscuta*, a total stem parasite.

8 **(c)**

In pea and bean flowers, there are five petals, the largest (standard) ovarlaps the two lateral petals (wings) which in turn overlap the two smallest anterior petals (keel); this type of aestivation is known as vexillary or papilionaceous



9 **(c)**

A typical root possess the four parts or regions

(i) **Root Cap** The root is covered at the apex by thimble like structure called root cap. It protects the tender apex of root as it makes its way through soil

(ii) **Region of Meristematic Activity** Few millimeters above the root cap. The cells of this region are very small, thin walled and dense protoplasm. They divide repeatedly

(iii) **Region of Elongation** The cells proximal to the meristematic zone undergoes the rapid elongation and enlargement and are responsible for growth of root in length

(iv) **Region of Maturation** The cells of elongation zone gradually differentiate and mature. This zone lies just proximal to the region of elongation

10 **(c)**

In pea seed, endosperm is consumed by developing embryo.

11 **(d)**

Floral characters of lily family

Inflorescence Solitary/cymose; often umbellate clusters

Flower Bisexual; actinomorphic

Perianth Tepal six (3+3), often united into tube, valvate aestivation

Androecium Stamen six (3+3)

Gynoecium Tricarpellary, syncarpous, ovary superior, trilocular with many ovules; axile placentation

Fruit Capsule, rarely berry

Seed Endospermous

Floral formula ⊕ ⚥ $P_{3+3}A_{3+3}\underline{G}_{(3)}$

Or (3+3)

12 **(d)**

Malvaceae shows pentamerous flower, superior ovary, and numerous stamens and monoadelphous androecium. All stamens form a single group.

13 **(a)**

Parthenocarpy is the phenomenon of formation of fruit without fertilization. Usually, these Parthenocarpic fruits are seedless, *e.g.*, seedless banana, seedless grapes, seedless oranges.

14 **(b)**

In insectivorous plant Nepenthes, the lamina forms the pitcher, the lid represents the apex, and the petiole is tendrilar, whereas leaf base is flattened. In *Utricularia*, which is submerged floating hydrophyte, the leaves are dissected and some of the leaf segments get modified into tiny bladders.

15 **(d)**

The main functions of the root system are absorption of water and mineral from soil, providing a proper anchorage to plant parts, storing reserve food material and synthesis of plant growth regulators

16 **(c)**

Drupe The pericarp is differentiated into epicarp, mesocarp and endocarp. Endocarp is stony. Hence, the drupes are also called stone fruits. Drupe develops from monocarpellary superior ovaries and are one seeded

17 **(d)**

In monocotyledonous seeds, the embryo is small and situated in a groove at one end of the endosperm. Embryo consists of one large and shield shaped cotyledon known as scutellum and a short axis with a plumule and a radicle. The plumule and radicle are enclosed in sheaths which are called coleoptile and coleorhiza, respectively

18 **(d)**

Perianth Onion flower have 6 tepals in two alternate whorld of three each, polyphyllous
Androecium Six, stamens in two whorls of three each opposite the tepals; antipetalous
Gynoecium Tricarpellary, syncarpous ovary, trilocular with 2 ovules in each locules.
So, from the description it is clear that the given floral diagram is of onion plant

19 **(d)**

Generally, parallel venation are found in the monocots but *Smilax* and *Colocasia* are two exception in which reticulate venation are found. Gram is dicot and venation found in gram is reticulate

20 **(a)**

Nutation movements are shown by tendrils, which get spirally coiled due to more growth on outer side.

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