DPP
DAILY PRACTICE PROBLEMS

Class : XIth
Date :

Solutions

Subject : BIOLOGY
DPP No. : 6

Topic :-Anatomy Of Flowering Plants

1 **(d)**
In dicotyledonous root, the condition of xylem is exarch as the protoxylem away from the centre and metaxylem towards the centre. In dicotyledonous stem (*e.g., Cucurbita*), the condition of xylem is endarch as the metaxylem away from the centre and protoxylem towards the centre.

2 **(d)**
Dendrochronology is the branch of Botany that deals with the determination of age of a tree by counting and analyzing the annual growth rings of the tree.

3 **(b)**
In flowering plants, vascular tissues develop from plerome of apical meristem.

4 **(b)**
Generally in leaves of dicots, the protoxylem (newly formed xylem) face towards the adaxial (upper) surface or side

5 **(b)**
A–spring wood, B–autumn wood.
The spring wood is lighter in colour and has a lower density whereas the autumn wood is darker and has higher density. The two kinds of woods that appear as alternate concentric rings, constitutes an annual ring. Annual rings seen in a cutted stem give an estimate of the age of the tree

6 **(d)**

In stems, the protoxylem lies towards the centre (pith) and the metaxylem lies toward the periphery of organ. This type of primary xylem is called endarch

7 **(a)**

The centre of monocot root or dicot root is occupied by pith. It consists of parenchymatous (thin-walled or thick-walled) cells which may be rounded or angular. Intercellular spaces are present in the pith cells. The pith cells stores food. Pith is small or inconspicuous in dicots and large, conspicuous in monocots

8 **(b)**

The histogens are the group of cells, which give rise to future tissues. Major histogens of stem are as follows

1. **Dermatogen** forms external layers like epidermis.
2. **Plerome** forms central core of tissues like pith and vascular bundles.
3. **Periblem** forms the region between central core and epidermis such as endodermis, cortex, etc.

9 **(d)**

Vascular cambium gives rise to secondary growth.

10 **(d)**

Isobilateral leaves or monocotyledons leaves are thickened on the free side, where silica and cutin are deposited. These deposition protects the leaves from herbivores

11 **(d)**

Differentiation between dicot and monocot root

Dicot Root	Monocot Root
1. Cortex is narrow 2. Small inconspicuous pith 3. Fewer xylem bundle	Cortex is very wide Pith is large and generally conspicuous More than six (polyarch) xylem bundles

4. Secondary growth is present	Secondary growth is absent

12 **(a)**
In amphivasal vascular bundle, the phloem is surrounded by xylem.

13 **(a)**
The stele composed of two or more than two concentric rings of vascular bundles is called polycyclic, as found in *Pteridium* rhizome.

14 **(d)**
The stomatal aperture, guard cells and the surrounding subsidiary cells are together called stomatal apparatus

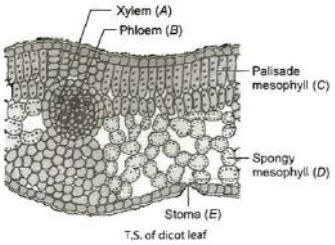
15 **(b)**
Apical meristems are primary meristems, which are located in the growing points (roots and shoot apices), as well as buds in the axils of leaves. The various organs increase in length due to activity of apical meristem.

16 **(a)**
Xylem fibres.
Xylem or Wood fibres They are sclerenchymatous fibres associated with xylem. Xylem fibres are mainly mechanical in function.
Xylem fibres have highly thickened walls and obliterate central lumens. These may either be septate or aseptate

17 **(c)**
In root meristem, the quiescent centre serves as reserve for replenishment of damaged cells.

18 **(b)**
On the basis of their structure and location, there are three types of tissue systems. These are epidermal tissue system, the ground or fundamental tissue system and vascular or conducting tissue system

19 **(c)**
TS of dicot root. Palisade and spongy mesophyll tissue are the characteristic of dicot leaves



T.S. of dicot leaf

20 **(b)**

In gasses*, i.e.*, monocots, the guard cells are dumb-bell shaped

ANSWER-KEY										
Q.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
A.	**d**	**d**	**b**	**b**	**b**	**d**	**a**	**b**	**d**	**d**
Q.	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
A.	**d**	**a**	**a**	**d**	**b**	**a**	**c**	**b**	**c**	**b**