

Topic :-Anatomy Of Flowering Plants

- 1 (d)
T.S. of dicot root (A-collenchyma, B-parenchyma, C-cambium, D-protoxylem, E-pith)
- 2 (b)
Root is that part of plant body which grow and down into earth. The primary roots develop from radicle and gives secondary and tertiary roots. Lateral roots develop endogeneously *i.e.*, from pericycle.
- 3 (c)
Companion cell is a thin-walled elongated cell, which is associated with sieve tube. The sieve tube elements lack nucleus, they remain living being depends upon the adjacent companion cell nucleus.
- 4 (b)
Gerontology is the study of ageing and senescence.
- 5 (b)
The term **leptome** is used for soft-walled conducting part of the phloem; it includes sieve elements, companion cells and parenchyma cells.
- 6 (d)
Intercalary meristem.
The meristem which occurs between mature tissues is known as intercalary meristem. They occurs in grass and regenerate the parts removed by grazing herbivores
- 7 (a)
In plants, xylem conducts the water and minerals. Thus, in xylem sap, sugar would be in significant amount.
- 8 (c)
The secondary meristem initiates radial growth.

9 **(b)**
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

10 **(b)**
Vascular cambium forms phloem tissue outside. Food synthesised in the leaves move to different parts of the plant through the phloem.

11 **(b)**
Prickles are the example of emergences. These are multicellular epidermal sharp and stiff outgrowth, which do not have vascular supply. They protect the plant from excessive transpiration, grating animals and in some, helps the plant in climbing

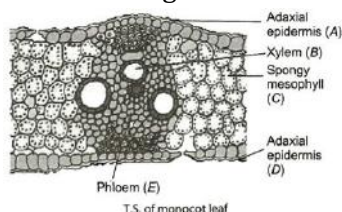
12 **(a)**
The cortex of hydrophytes is well developed. Major portion of it is occupied by well-developed prominent air cavity called **aerenchyma**, which increase buoyancy and allows a rapid gaseous exchange.

13 **(b)**
In a dicot stem, secondary growth occurs due to lateral meristem.

14 **(d)**
Cork cambium or phellogen is a lateral meristem as it is responsible for increase in the thickness of stem. It is secondary in origin and function. It gives rise to secondary tissues like cork and secondary cortex.

15 **(b)**
Endodermis is innermost distinct layer of cortex. The endodermis is uniseriate and almost universally present in the roots. The cells of endodermis are living and characterized by presence of Casparian strips or Casparian bands on their anticlinal walls. The strip is formed during the early ontogeny of the cell and is a part of primary wall. The strip is typically located close to the inner tangential wall. Thin-walled **passage** cells are also found in the endodermal layer, which lie against the protoxylem poles.

16 **(d)**
T.S of monocot leaf. In monocot leaf the adaxial and abaxial both surfaces same and equally receive sunlight



- 17 **(c)**
The **intercalary meristems** are responsible for localised growth. Perhaps they have been detached from the mother meristem, *e.g.*, meristem present at the base of leaves in many monocots, in the internode of grasses, at the top of peduncles of *Plantago* and *Taraxacum*, etc.
- 18 **(a)**
Phytotron is a device or chamber, in which plants can be grown under controlled conditions.
- 19 **(c)**
Meristematic tissue is a group of cells specialized for the production of new cells, *i.e.*, perpetuates itself by active cell division.
- 20 **(a)**
In amphivasal vascular bundle, phloem is surrounded by xylem, *e.g.*, *Dracaena*.

PE

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

PE