Class-11th- Test

ANATOMY OF FLOWERING PLANTS

&

CELL: THE UNIT OF LIFE

M.M-35 **TIME-1.5 HR**

SECTION A

Multiple Choice Questions **[1X 10=10]**

1. Schleiden and Schwann's cell theory could not explain

(a) cell formed from pre-existing cell

(b) how new cells were formed

(c) body of animals are composed of cells

(d) cells have a thin outer layer called plasma membrane

2. In a dorsiventral leaf, the ……epidermis generally bears more stomata than the ……. epidermis.

(a) upper and lower

(b) adaxial and adaxial

(c) abaxial and adaxial

(d) abaxial and lower

3. Consider the given organisms.

I. PPLO

II. Mycoplasma

III. Viruses

IV. Bacteria

V. Blue-green algae

Which of the above represent prokaryotic cells?

(a) I, II and IV

(b) II and IV

(c) I, II, IV and V

(d) IV and II

4. The water containing cavities in vascular bundles are found in

(a) sunflower

(b) maize

(c) Cycas

(d) Pinus

5. Consider the following statements.
I. Water impermeable waxy material suberin is deposited on the ___ (i) ___ in the form of ___ (ii) ___.
II. Initiation of lateral roots and vascular cambium during secondary growth occurs in ___ (iii) ___.
III. Inner endodermis tissues such as vascular bundles and pith constitute ___ (iv) ___.
(a) (i) endodermal cell, (ii) Casparian strips, (iii) pericycle, (iv) stele
(b) (i) epidermal cells, (ii) vascular bundle, (iii) bast cells, (iv) periderm
(c) (i) protodermal cells, (ii) conjunctive tissue, (iii) pith, (iv) endodermis
(d) (i) endodermis, (ii) lignin, (iii) bast cells, (iv) stele

6. Plasmids of bacterial cell possess all the following characteristics except
(a) these are extrachromosomal DNA
(b) these are used in genetic engineering
(c) these help in the replication of nucleoid
(d) these are small, circular and confer unique phenotypic characters to some bacteria

7. The conjunctive tissue is made up of
(a) parenchymatous cells, which lie between the xylem and phloem
(b) sclerenchymatous cells, which lie between the xylem and phloem
(c) collenchymatous cells, which lie between the xylem and phloem
(d) meristematic cells, which lie between the xylem and phloem

8. Which of the following feature is incorrect regarding monocotyledonous root?
(a) Pith is large and well-developed
(b) Secondary growth present
(c) Xylem bundles in polyarch condition
(d) Prominent cortex, pericycle and pith

9. Consider the following characters.
I. Presence of nucleus.
II. Presence of nuclear membrane.
III. Semi-fluid matrix called cytoplasm.
IV. Presence of distinct cell wall.

V. Ribosomes attached to endoplasmic reticulum.
VI. Non-membrane bound centrosome.

Which of the above given characters can differentiate a plant and an animal cell?

(a) I, III and IV
(b) IV and V
(c) IV and VI
(d) I, IV and V

10. Choose the incorrect pair considering dicot stem.

(a) Hypodermis – Provides mechanical strength to young stems
(b) Starch grains – Present in cells of endodermis
(c) Pericycle – Presents above phloem in the form of semilunar patches of sclerenchyma
(d) Vascular bundles – Multilayered arrangement with exarch protoxylem

SECTION – B **[2X3= 6]**

11. DIFFERENTIATE B/W STRUCTURE OF DICOT & MONOCOT ROOT ON THE BASIS OF THEIR ANATOMICAL STRUCTURE.

12. DRAW & EXPLAIN STRUCTURE OF VACUOLE.

13. WHAT IS CAMBIUM ? HOW WILL YOU DIFFERENTIATE VASCULAR TISSUE ON THE BASIS OF IT ?

SECTION-C **[3X 3= 9]**

14. WHAT ARE THE MODIFICATIONS OF EPIDERMAL TISSUE ? MENTION & EXPLAIN THEM.

15. WHICH ORGENELLES ARE THE PART OF ENDOMEMBRANE SYSTEM ? WRITE THE FUNCTIONS OF THEM.

16. DRAW WELL LABELLED TRANSVERSE SECTION OF DICOT STEM.

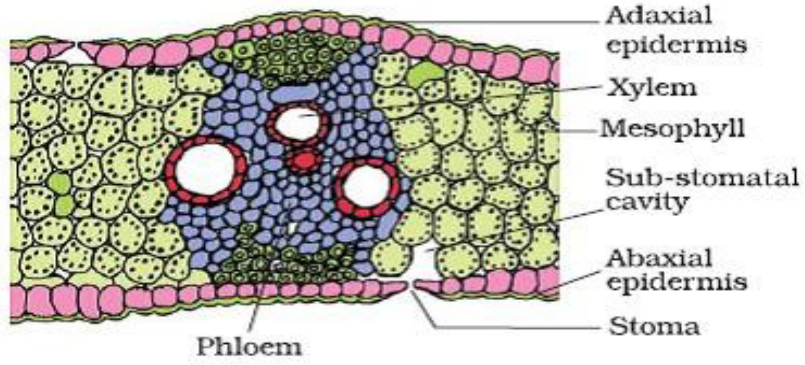
SECTION-D **[5X1= 5]**

17. DRAW & EXPLAIN STRUCTURE OF PROKARYOTIC CELL.

CASE STUDY **[1X5= 5]**

18. There are a lot of different types of cells inside a plant that are specialised for carrying out different vital life functions, one of the types is parenchyma. Parenchyma refers to a bulk or a cluster of cells. In plants, it is defined as a tissue that is composed of living cells with very thin cell walls. Parenchyma cells make up the non-woody interior structure of many plants. They can be found in stems, roots and leaves as they form the cortex of these structures.

Observe the diagram carefully and answer the following questions.



(A) A distinct layer lies on the upper epidermis prevents excessive transpiration is:
(a) Guard cells
(b) Cuticle
(c) Mesophyll
(d) Bundle sheath

(B) The spongy parenchyma lies:
(a) between the upper epidermis and lower epidermis
(b) below the vascular bundles
(c) between the lower epidermis and palisade parenchyma
(d) below the upper epidermis

(C) The leaf which is distinct into upper and lower surfaces and mesophyll are distinguishable is:

(a) Dorsiventral

(b) Isobilateral
(c) Unifacial
(d) All of these

(D) Identify the simple tissue system from the following.
(a) Parenchyma
(b) Xylem
(c) Epidermis
(d) Phloem

(E) Bulliform or motor cells are present in:
(a) In both adaxial and abaxial epidermal cells of a dicot.
(b) In some adaxial epidermal cells of grasses.
(c) In adaxial epidermal of dicot leaves.
(d) None of the above