Chapter-6

TISSUES

A. CHOOSE THE CORRECT OPTION

2. In plants which of the following have the capability of cell division?

(a) Parenchyma

(b) Scelerenchyma

(c) Xylem

(d) Apical Meristem

3. The growth is plants is

(a) limited to certain regions

(b) uniform in all parts

(c) limited to top region

(d) limited to roots only.

4. Intercalary meristems are found

(a) at internodes and base of leaves

(b) at growing tips of roots

(c) beneath the bark

(d) at the tips of stem

5. Cells of the tissue have dense cytoplasm, thin cellulose walls and prominent vacuoles. Identify the tissue.

(a) Collenchyma

(b) Scelerenchyma

(c) Meristem

(d) Parenchyma

6. Dead long and narrow cells in a plant belong to which tissue?

(a) Parenchyma

(b) Scelerenchyma

(c) Collenchyma

(d) Phloem

7. Bone is an example of _____

(a) Muscular tissues

(b) Connective tissue

(c) Epithelial tissues

(a) Nervous tissues

8. Which animal tissue are usually separated from the underlying tissue by an extracellular fibrous basement membrane?

(a) Muscular tissues

(b) Connective tissues

(c) Epithelial tissues

(d) Nervous tissues

9. Oesophagus and the lining of the mouth are also covered with which tissues?

(a) Squamous epithelium

(b) Ciliated epithelium

(c) Areolar connective

(d) Striated muscle tissues

10. Husk of a coconut is made of which tissues?

(a) Parenchyma tissue

(b) Sclerenchymatous tissue

(c) Collenchyma

(d) Xylem

11. The study of tissues is called ...

(a) cytology

(b) embryology

(c) histology

(d) pathology

12. Which of the following statement is NOT true?

(a) Most of the plant tissues are supportive type.

(b) Tissues ensure division of labour.

(c) Sedantry existence contribute to the organ system design in animals.

(d) Organ systems are far more complex in animals than in plants.

13. Many kinds of tissues organise to form a/an

(a) organ

(b) organ system

(c) body system

(d) organelle

14. Parenchyma is a type of ___

(a) simple tissue

(b) complex tissue

(c) xylem

(d) phloem

15. Which of the following is not a simple tissue?

(a) xylem

(b) parenchyma

(c) collenchyma

(d) sclerenchyma

16. The husk of the coconut is made up of?

(a) collenchyma

(b) sclerenchyma

(c) apical meristem

(d) intercalary meristem

17. The basic principle based on which categorise plant tissues as meristematic and permanent is:

(a) capacity to do photosynthesis

(b) capacity to divide

(c) capacity to locomote

(d) complexity to perform a function.

18. Which type of tissue has lignified cell walls?

(a) Parenchyma

(b) Collenchyma

(c) Sclerenchyma

(d) cambium

19. Which tissue is responsible for the length of the plant?

(a) Apical meristem

(b) lateral meristem

(c) Intercalary meristem

(d) Epidermis

20. The girth of the stem or root increases due to _

(a) Apical meristem

(b) Cambium

(c) Intercalary meristem

(d) Epidermis

21. Which meristem is present at the base of the leaves or internodes on twigs?

(a) Apical meristem

(b) Cambium

(c) Intercalary meristem

(d) Epidermis

22. Which of the following statements is incorrect?

(a) Some tissues in plants divide throughout the life

(b) Cell growth in animals is more uniform as compared to plants

(c) Animals have more dead tissues as compared to plants

(d) There is no demarcation of dividing and non-dividing regions in animals

23. What are the identifying features of meristematic tissues?

(a) thick cellulose wall, small vacuoles, dense cytoplasm, small nuclei

(b) thin cellulose wall, almost no vacuoles, dense cytoplasm, prominent nuclei

(c) thin cellulose wall,no vacuoles, sparse cytoplasm, prominent nuclei

(d) thick cellulose, large vacuoles, sparse cytoplasm, small nuclei

24. A permanent slide shows thin walled isodiametric cells with a large vacuole. The slide contains:

(a) Parenchyma cells

(b) Nerve cells

(c) Sclerenchyma cells

(d) Collenchyma cells

25. Aditi observed following observations while looking into a permanent slide.

(i) Cells are long and cylindrical

(ii) Light and dark bands are

present. It could be a slide of :

(a) striated muscle fibre

(b) smooth muscle fibre

(c) neuron

(d) parenchyma cells

26. The inner lining of blood vessels is made up of which tissues?

(a) Nervous tissue

(b) Epithelial tissue

(c) Connective tissue

(d) Muscle tissue

2 MARKS QUESTIONS

1. Explain the statement 'Tissues exhibit division of labour'. Give examples.
2. What is the utility of tissues in multi-cellular organisms?
3. Why do plants have more dead tissues as compared to animals?
4. Why do plant tissue require less amount of energy in comparison to animal tissues?
5. Why do animals tissues require more energy as compared to plant tissues?
6. Name types of simple tissues.
7. Where is apical meristem found?
8. Which tissue helps in increasing the length of stem and root?
9. Which tissues are responsible for the axial growth of plants?
10. Which tissue makes up the husk of coconut?
11. What are the constituents of phloem?
12. Name the tissue responsible for the movement in our body.
13. What does a neuron looks like?
14. Give three features of cardiac muscles.
15. What are the functions of areolar tissue?
16. List the characteristics of meristematic tissues.
17. Where do we find intercalary meristem?
18. Which tissues are responsible for the secondary growth of plants?
19. What do you mean by 'Differentiation' in plant tissues?
20. What is the shape of Parenchyma cells?
21. What is the structure and nature of Parenchyma tissue?
22. Where do you find Parenchyma cells in Plants?
23. What are the identifying features of collenchyma tissue?
24. Where do you find collenchyma tissues in plants?
25. Which tissue primarily attributes to easy bending of various parts of plants (like stem, leaves)?
26. Which plant tissues are often called as stone cells?

27. Deepa was shown two slides of plant tissues: parenchyma and sclerenchyma. She can identify sclerenchyma by the
    (a) location of nucleus
    (b) size of cells
    (c) thickness of cell walls
    (d) position of vacuoles
28. What is aerenchyma?
29. What is the primary surface tissue of the entire plant?
30. How does epidermis help xerophytes?
31. Which meristem replaces epidermis as the protective covering?
32. List the functions of epidermis.
33. Which tissue is known as living mechanical tissue?
34. Why the cell walls of collenchyma tissues are unevenly thickened?
35. Are Collenchyma tissues present in roots of the plants?
36. Usually Shrubs and herbs grow in open places and are exposed to forceful winds. But they do not break.Why?
37. Name the chemical released by cork cells?
38. How are complex tissues different from simple tissues?
39. Name two types of complex tissues.
40. Why are Xylem and Phloem are called vascular or conducting tissues?
41. Which plant tissue is considered to have played an important role in survival of terrestrial plants?
42. Why vascular tissue is considered a distinctive feature responsible for survival of plants in terrestrial plants?
43. Is xylem (or phloem) homogenous tissue or heterogeneous tissue?
44. List the cellular elements of xylem tissue?
45. What is the role of xylem tissue?
46. Name the cellular elements of Phloem tissue.
47. List functions of phloem tissue?
48. Which Phloem cellular element has tubular structure with perforated walls?
49. Why are Xylem and Phloem known as conducting tissues?
50. Why are Xylem and Phloem called as vascular tissues?
51. Why are Xylem and Phloem known as complex permanent tissues?

52. Why do meristematic cells lack vacoules?

53. Muscles contain special proteins called_____that help in muscle movement.

(a) recptor proteins

(b) enzymes

(c) nucleo proteins (DNA, RNA)

(d) contractile proteins (actin and myosin)

3MARKS QUESTION

1. List the characteristics of cork. How are they formed? Mention their role.

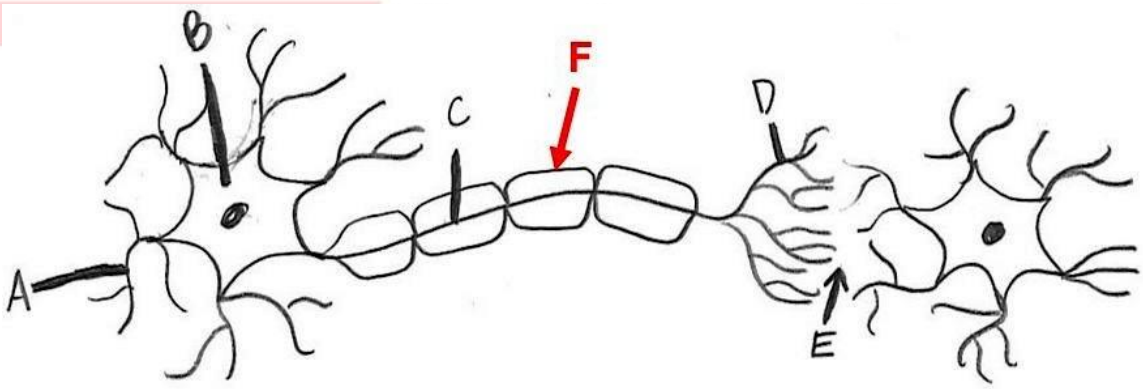
2. Why are xylem and phloem called complex tissues? How are they different from one other?

3. (a) Differentiate between meristematic and permanent tissues in plants

(b) Define the process of differentiation

(c) Name any two simple and two complex permanent tissues in plants.

4. Label the parts of the neuron below:



5. What is the role of xylem tissue?

6. Name the cellular elements of Phloem tissue.

7. List functions of phloem tissue?

8. Which Phloem cellular element has tubular structure with perforated walls?

9. Why are Xylem and Phloem known as conducting tissues?

10. Why are Xylem and Phloem called as vascular tissues?

11. Why are Xylem and Phloem known as complex permanent tissues?

12. Why do meristematic cells lack vacoules?

13. Muscles contain special proteins called_____that help in muscle movement.

(e) recptor proteins

(f) enzymes

(g) nucleo proteins (DNA, RNA)

(h) contractile proteins (actin and myosin)

5MARKS QUESTIONS

14. Match the column (A) with the column (B)

(A)	(B)
(a) Fluid connective tissue	(i) Subcutaneous layer
(b) Filling of space inside the organs	(ii) Cartilage
(c) Striated muscle	(iii) Skeletal muscle
(d) Adipose tissue	(iv) Areolar tissue
(e) Surface of joints	(v) Blood
(f) Stratified squamous epithelium	(vi) Skin

15. Match the column (A) with the column (B)

(A)	(B)
(a) Parenchyma	(i) Thin walled, packing cells
(b) Photosynthesis	(ii) Carbon fixation
(c) Aerenchyma	(iii) Localized thickenings
(d) Collenchyma	(iv) Buoyancy
(e) Permanent tissue	(v) Sclerenchyma

16. If a potted plant is covered with a glass jar, water vapours appear on the wall of glass jar. Explain why?

17. Name the different components of xylem and draw a living component?

18. Draw and identify different elements of phloem.

19. Write true (T) or false (F)

(a) Epithelial tissue is protective tissue in animal body.

(b) The lining of blood vessels, lung alveoli and kidney tubules are all made up of epithelial tissue.

(c) Epithelial cells have a lot of intercellular spaces.

(d) Epithelial layer is permeable layer.

(e) Epithelial layer does not allow regulation of materials between body and external environment.

20. Differentiate between voluntary and involuntary muscles. Give one example of each type.

21. Water hyacinth float on water surface. Explain.

22. Which structure protects the plant body against the invasion of parasites?

23. Differentiate the following activities on the basis of voluntary (V) or involuntary (I V) muscles.

(a) Jumping of frog

(b) Pumping of the heart

(c) Writing with hand

(d) Movement of chocolate in your intestine

24. Fill in the blanks

(a) Lining of blood vessels is made up of———.

(b) Lining of small intestine is made up of ———.

(c) Lining of kidney tubules is made up of———.

(d) Epithelial cells with cilia are found in———of our body