

Chapter 4

Put line under your answer! There is only one correct answer in the multiple choice questions

- 1. Which of the following is a meristematic tissue?**
 - a) parenchyma
 - b) cork cambium
 - c) xylem
 - d) collenchyma
 - e) epidermis
- 2. Which of the following tissues has food conduction as a primary function?**
 - a) epidermis
 - b) parenchyma
 - c) sclerenchyma
 - d) collenchyma
 - e) phloem
- 3. Which of the following tissues has support as one of its primary functions?**
 - a) cork
 - b) vascular cambium
 - c) parenchyma
 - d) cork cambium
 - e) xylem
- 4. Which of the following cells has a relatively thick wall?**
 - a) companion cell
 - b) parenchyma cell
 - c) sclereid
 - d) sieve-tube element
 - e) vascular cambium cell
- 5. Which of the following is a primary meristem?**
 - a) protoderm
 - b) cork cambium
 - c) collenchyma
 - d) lenticels
 - e) root hair
- 6. In woody dicots, the periderm eventually replaces**
 - a) xylem

- b) phloem
 - c) epidermis
 - d) pith
 - e) endodermis
- 7. Guard cells differ from other epidermal cells in having**
- a) uniformly thickened walls
 - b) no nucleus
 - c) chloroplasts
 - d) surface hairs
 - e) large pores in the walls
- 8. Fiber cells are commonly found in**
- a) cortex
 - b) pith
 - c) epidermis
 - d) xylem
 - e) endodermis
- 9. Parenchyma cells that develop irregular extensions of the inner wall that greatly increase the surface area are called**
- a) transfer cells
 - b) sclereids
 - c) aerenchyma
 - d) tracheids
 - e) lenticels
- 10. In grasses and related plants, intercalary meristems are found in the vicinity of**
- a) axillary buds
 - b) roots
 - c) nodes
 - d) cuticles
 - e) leaf tips
- 11. Which of the following is NOT considered a permanent tissue?**
- a) parenchyma
 - b) collenchyma
 - c) epidermis
 - d) cork cambium
 - e) phloem
- 12. The protoderm produces the**

- a) epidermis
 - b) cortex
 - c) secretory cells
 - d) periderm
 - e) intercalary meristems
- 13. Which of the following is a type of sclerenchyma cell?**
- a) companion cell
 - b) sieve-tube element
 - c) procambium cell
 - d) ray cell
 - e) fiber
- 14. A primary function of tracheids is**
- a) food storage
 - b) food conduction
 - c) water conduction
 - d) water storage
 - e) secretion of latex
- 15. The porous regions of food-conducting cells are called**
- a) ray initials
 - b) pits
 - c) albuminous cells
 - d) sieve plates
 - e) sieve tubes
- 16. Rays function primarily in**
- a) vertical conduction
 - b) water storage
 - c) food manufacture
 - d) food storage
 - e) lateral conduction
- 17. Conducting cells that are open at either end include**
- a) sieve cells
 - b) vessel elements
 - c) parenchyma cells
 - d) fibers
 - e) stone cells
- 18. The tissue in which lenticels are formed is**
- a) periderm

- b) chlorenchyma
 - c) epidermis
 - d) cork cambium
 - e) collenchyma
- 19. Primary tissues are produced by**
- a) secondary meristems
 - b) vascular cambium
 - c) cork cambium
 - d) xylem
 - e) primary meristems
- 20. The fatty substance in the walls of cork cells is**
- a) cutin
 - b) latex
 - c) suberin
 - d) pectin
 - e) cellulose
- 21. A tissue composed of thin-walled cells with interconnecting air spaces between them is called**
- a) collenchyma
 - b) chlorenchyma
 - c) sclerenchyma
 - d) aerenchyma
 - e) secretory tissue
- 22. Lignin is found primarily in**
- a) parenchyma
 - b) sclerenchyma
 - c) collenchyma
 - d) aerenchyma
 - e) chlorenchyma
- 23. Which of the following may be secreted by secretory cells?**
- a) nectar
 - b) oils
 - c) mucilage
 - d) resins
 - e) All of these answer are correct
- 24. The tiny cavity at the center of fiber and stone cells is called a**
- a) vacuole

- b) air space
- c) lumen
- d) food pocket
- e) water-storage area

25. Collenchyma cells are most often found adjacent to

- a) the epidermis
- b) the xylem
- c) the vascular cambium
- d) the cork cambium
- e) ray cells

Put (True) or (False) with each following sentences.

- 26. A ground meristem produces a primary tissue ().
- 27. The vascular cambium produces tissues that increase the girth of a plant ().
- 28. Periderm is another name for epidermis ().
- 29. Chlorenchyma tissue is composed primarily of collenchyma cells ().
- 30. Stone cells and fibers have relatively thick walls ().
- 31. The primary function of sieve-tube elements is conduction of food in solution ().
- 32. Sieve-tube elements have pairs of pits in their end walls ().
- 33. The vessel elements of xylem have adjacent companion cells that aid in the conduction of water ().
- 34. Latex and resin are examples of substances conducted by the phloem ().
- 35. Some epidermal cells may be modified as glands ().
- 36. Secretory cells release substances that have been produced in the protoplasm ().
- 37. In woody plants most of the vascular tissues are produced by the cork cambium ().
- 38. Companion cells are found adjacent to vessel elements ().
- 39. Albuminous cells function in the same manner as companion cells ().
- 40. The porous regions of sieve-tube elements are called sieve plates ().

Matching: Write in middle column the number for the best answer.

1. A tissue	10	two types of sclerenchyma.
2. Intercalary meristems	9	function mostly in food or water storage.
3. Primary meristems	8	containing numerous chloroplasts.
4. Lateral meristems	7	parenchyma tissue with extensive connected air spaces.
5. Vascular cambium	6	have thickened walls and provide flexible support.
6. Collenchyma cells	5	produces secondary tissues that function primarily in support and conduction.
7. Aerenchyma	4	like the vascular cambium and cork cambium.
8. Chlorenchyma tissue	3	include protoderm, ground meristem, and procambium.
9. Parenchyma tissues	2	occur in the vicinity of nodes of grasses.
10. Fibers and sclereids	1	A group of cells performing a common function.
11. conducts	15	are dead at maturity and function in support.
12. Xylem tissue	14	the most important complex tissues in plants.
13. Xylem conducts	13	water and minerals throughout the plant.
14. Xylem and phloem	12	It consists of a parenchyma, fibers, vessels, tracheids, and ray cells
15. Sclerenchyma tissue	11	primarily dissolved sugars throughout the plant.
16. Sieve plates	20	it is composed of sieve tubes, companion cells, parenchyma, ray cells, and fibers.
17. Sieve tube	19	aids in plugging injured sieve tubes.
18. Sieve cells	18	adjacent albuminous cells in ferns.
19. Callose	17	adjacent companion cells in flowering plant.
20. Phloem	16	porous regions of sieve tube members.
21. The epidermis	25	function in gas exchange in periderm.
22. Cuticle	24	consists of cork cells impregnated with suberin.
23. Stomata	23	bordered by pairs of guard cells.
24. Periderm	22	cutin forms a protective layer.
25. Lenticels	21	outermost layer of cells of all young plant organs.
26. Secretory tissues	26	secrete nectar, oils, mucilage, latex, and resins.