

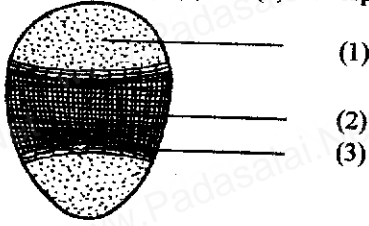
EQUITAS GURUKUL MHSS, DINDIGUL
NEET TYPE QUESTIONS
BIO-BOTANY – PLANT ANATOMY

1. Which of the following statement on the meristematic cells is/are correct?
 - a) The cells are closely arranged with intercellular spaces.
 - b) They contain dense cytoplasm and large vacuoles.
 - c) The cell wall is thin made up of cellulose
 - d) They contain a lining layer of cytoplasm without nucleus.
 1. (a), (b) and (d)
 2. (c) only
 3. (b) and (d)
 4. (b) and (c)
2. Which of the following statement(s) is/are wrong?
 - a) Ground meristem is a part of apical meristem which gives rise to cortex and pith.
 - b) Vascular cambium and procambium are lateral meristems.
 - c) Intercalary meristem is derived from apical meristem.
 - d) Lateral meristems are responsible for the elongation of internode.
 1. (a) and (c)
 2. (b) and (d)
 3. (d) only
 4. (b), (c) and (d)
3. Protoderm gives rise to
 1. epidermis
 2. cortex
 3. pith
 4. vascular tissue
4. Which one of the following is otherwise called phellogen?
 1. procambium
 2. vascular cambium
 3. cork cambium
 4. fascicular cambium
5. Which one of the following statement is wrong?
 1. The cells which are formed by apical meristem are differentiated into permanent tissues.
 2. Permanent tissues have lost the power of dividing either permanently or temporarily.
 3. Permanent tissue is of two types – simple tissues and meristematic tissues
 4. Parenchyma is a simple permanent tissue.
6. Simple or branched pits are seen in
 1. fibres
 2. sclereids
 3. parenchyma
 4. tracheids
7. The parenchyma cells that are seen in Nymphaea, root tubers, green parts of the plants and petioles of banana are respectively
 1. aerenchyma, storage parenchyma, collenchyma and stellate parenchyma
 2. aerenchyma, chlorenchyma, storage parenchyma and stellate parenchyma
 3. aerenchyma, storage parenchyma, chlorenchyma and stellate parenchyma
 4. storage parenchyma, stellate parenchyma, chlorenchyma and aerenchyma
8. Which one of the following statement is wrong?
 1. In dicot stem, two or more layers of collenchyma below the epidermis constitute the hypodermis.
 2. Hypodermis is absent in the roots of land plants.
 3. Hypodermis occurs in the petiole and pedicel.
 4. The hypodermis of sun flower stem has lacunate collenchymas
9. Which one of the following statement is correct?
 1. In some leaves collenchyma is located at the margins of lamina.
 2. Collenchyma is a dead tissue
 3. Collenchyma consists of more or less elongated cells with evenly thickened walls.
 4. The cells that constitute the hypodermis of Ipomea is made up of cellulose and pectin only
10. Match the following.

Part A	Part B
a) brachy sclereids	i) Ipomea
b) osteosclereids	ii) pulp of pyrus
c) macrosclereids	iii) cotton
d) surface fibres	iv) seed coat of Pisum
	v) seed coat of Crotalaria

 1. a - ii, b - iii, c - iv, d - v
 2. a - v, b - iv, c - iii, d - i
 3. a - ii, b - iv, c - iii, d - i
 4. a - ii, b - iv, c - v, d - iii
11. The sclerenchyma cells associated with xylem tissue
 1. Tracheids
 2. Fibres
 3. Trachea
 4. Sclereids

12. In the diagram of bicollateral vascular bundle given below, (1), (2) and (3) are respectively



1. bundle cap, cambium and xylem
 2. xylem, phloem and cambium
 3. phloem, xylem and cambium
 4. phloem, cambium and xylem
13. Which of the following is/are correct?
- a) A tissue is a group of cells which are similar in origin, form and function.
 - b) Collenchyma is the precursor of all other tissues.
 - c) Collenchyma is a simple living tissue. It is seen in all parts of the plant
 - d) Sclerenchyma is a simple, dead tissue. It has no protoplasm.
1. (a), (b) and (c)
 2. (a) and (d)
 3. (d) only
 4. (b) and (d)
14. Find out the wrong pair.
1. Lamellar collenchyma - hypodermis of Helianthus
 2. Angular collenchyma - hypodermis of Datura.
 3. Lacunate collenchyma - hypodermis of Nicotiana
 4. Stellate parenchyma - Petiole of banana.
15. Which of the following statement(s) are correct?
- a) Primary xylem is derived from procambium
 - b) Earlier formed xylem elements are called protoxylem.
 - c) The later formed xylem elements are called metaxylem.
 - d) Secondary xylem is derived from cork cambium.
1. (a) and (b)
 2. (a), (b) and (c)
 3. (d) only
 4. (a) and (d)
16. Analyse the following statements and find out the correct answer.
- a) Tracheids are the perforate water conducting elements
 - b) Tracheids are long, pipe-line like structures
 - c) Tracheids are elongated, tapering cells with lignified secondary walls
 - d) Tracheids have broad lumen.
1. only (a) is correct
 2. (b) and (c) are wrong
 3. (c) and (d) are correct
 4. (a), (c) and (d) are correct
17. The chief water conducting elements of gymnosperms and pteridophytes are
1. Tracheids
 2. vessels
 3. sieve cells
 4. xylem fibres
18. Xylem fibres and phloem fibres are respectively known as
1. bast fibres and libriform fibres
 2. surface fibres and libriform fibres
 3. libriform fibres and bast fibres
 4. lint fibres and surface fibres
19. Which one of the following statement is wrong?
1. Tracheids conduct water through the bordered pits.
 2. Vessels conduct water through perforations.
 3. Multiple perforation plate is seen in the tracheids of Liriodendron.
 4. Vessels are seen in Gnetum of gymnosperms.
20. The only living tissue among the constituents of xylem is
1. xylem fibres
 2. xylem vessels
 3. border parenchyma
 4. xylem parenchyma
21. Phloem parenchyma is present in
1. pteridophytes, dicots and monocots
 2. gymnosperms, dicots and monocots
 3. pteridophytes, gymnosperms and dicots
 4. pteridophytes, gymnosperms and angiosperms
22. The Greek word 'xylas' means
1. conduction
 2. wood
 3. broad lumen
 4. Divisible
23. The procambium and vascular cambium produces
1. protophloem and metaphloem respectively
 2. primary phloem and metaphloem respectively
 3. primary phloem and secondary phloem respectively
 4. Epidermis and secondary phloem respectively
24. Which of the following statement(s) is / are wrong?
- a) Phloem fibres are absent in the primary phloem of most of the angiosperms.
 - b) Sieve tubes are present in pteridophytes and gymnosperms.
 - c) Companion cells are present only in angiosperms.
 - d) Vessels are also known as tracheae.
1. (b) and (d)
 2. (a) and (c)
 3. (b) only
 4. (a) and (d)
25. Thin walled, elongated, specialised parenchyma cells are
1. sieve cells
 2. border parenchyma
 3. stellate parenchyma
 4. companion cells

26. Which of the following statement(s) is/are correct?

- Sieve cells have sieve plates on their lateral walls
- Sieve tubes are not associated with companion cells
- Sieve cells occur in pteridophytes and bryophytes.
- Sieve tubes are arranged one above the other in linear rows.

- (b) and (c)
- (a) and (d)
- (d) only
- (c) only

27. The cell wall materials of collenchyma

- cellulose only
- cellulose and pectin
- cellulose, hemicellulose and pectin
- cellulose, hemicellulose and lignin

28. Endarch xylem means

- the first formed xylem is towards the periphery and the later formed xylem is towards the centre.
- the primary xylem is towards the centre and the secondary xylem is towards the periphery
- the first formed xylem is towards the centre and the later formed xylem is towards the periphery.
- the xylem formed from procambium is towards the periphery and the the xylem formed from vascular cambium is towards the centre.

29. The cells containing lignified secondary wall

- Tracheids
 - Xylem vessels
 - collenchyma
 - Fibres
 - Sclereids
 - Endodermis
- (a) and (b)
 - (a), (b) and (f)
 - (a), (b), (c) and (f)
 - (a), (b), (d) and (e)

30. Match Part A with Part B.

Part - A

- Chlorenchyma
- Collenchyma
- Parenchyma
- Aerenchyma

Part - B

- Hypodermis
- Floating
- Photosynthesis
- Lignin thickening
- Storage

- | | i | ii | iii | iv |
|----|---|----|-----|----|
| 1. | c | a | e | b |
| 2. | b | d | e | a |
| 3. | e | a | c | d |
| 4. | c | d | e | b |

31. The cells that give strength to the plant organs

- Tracheids, xylem vessels and Parenchyma.
- Collenchyma, Sclerenchyma and companion cells.
- Sieve tube elements, xylem vessels, Tracheids.
- Xylem vessels, Tracheids, Collenchyma and Sclerenchyma.

32. Which of the following are the living components?

- xylem parenchyma
- phloem fibres
- companion cell
- tracheids

- (a), (b) and (c)
- (a) and (c)
- (b) and (d)
- (a), (c) and (d)

33. Match Part A with Part B.

Part - A

- Bundle cap of dicot stem
- Starch sheath of dicot stem
- Bundle sheath of monocot stem
- Bundle sheath of dicot leaf

Part - B

- Endodermis of root
- Sclerenchyma
- Parenchyma
- Hardbast
- pericycle of root

- | | i | ii | iii | iv |
|----|---|----|-----|----|
| 1. | d | a | b | e |
| 2. | c | b | a | d |
| 3. | a | d | c | b |
| 4. | d | a | b | c |

34. Root hairs are produced from

- trichomes
- trichoblasts
- epidermis
- pericycle

35. When xylem and phloem lie in the same radius, the vascular bundle is known as

- tangential
- radial
- conjoint
- bilateral

36. The vascular bundle of dicot stem is explained as open, because

- xylem and phloem are arranged in the same radius
- It contains an opening
- Cambium is present
- Cambium is absent

37. Match the following and find out the correct answer
- bicollateral vascular bundle
 - Acorus
 - Polypodium
 - all monocots
 - Cucurbitaceae
 - all dicots
 - amphivasal vascular bundle
 - amphicribal vascular bundle
 - closed collateral vascular bundle
- i - e, ii - c, iii - b, iv - e
 - i - d, ii - a, iii - c, iv - b
 - i - a, ii - e, iii - b, iv - c
 - i - d, ii - a, iii - b, iv - c
38. Which one of the following statement is wrong?
- Pericycle produces lateral roots.
 - Endodermis occurs between the pericycle and the vascular bundles
 - The cortex occurs between the epidermis and pericycle.
 - The ground tissue of leaves consists of chlorenchyma cells
39. Find out the correct statement.
- The outermost layer of root is called endodermis.
 - The innermost layer of cortex of root is called rhizodermis.
 - The outermost layer of stele is called pericycle.
 - The innermost layer of cortex of monocot stem is starch sheath.
40. Cuticle and stomata are absent in the epidermis of
- dicot stem
 - dicot leaf
 - monocot stem
 - dicot root
41. In radial vascular bundle
- xylem and phloem are arranged in the same radius.
 - xylem and phloem are arranged in different radii
 - cambium is seen in between xylem and phloem
 - the vascular bundle is surrounded by a bundle sheath.
42. Passage cells occur
- in the endodermal cells opposite to the metaxylem elements
 - in the pericycle cells opposite to the protoxylem points
 - in the endodermal cells opposite to the protoxylem points
 - in the cortical cells
43. Metaxylem vessels are polygonal in
- dicot roots
 - monocot roots
 - dicot stem
 - monocot stem
44. Casparian strips are made up of
- Cutin
 - Pectin
 - Suberin
 - Lignin
45. Which of the following cells have chloroplast?
- Chlorenchyma
 - Guard cells
 - Spongy parenchyma
 - Sclereids
 - Trichoblasts
 - Tracheids
- (a), (e) and (f)
 - (a) and (c)
 - (a), (c) (d) and (f)
 - (a), (b) and (c)
46. Skull shaped vascular bundles are found in
- Sunflower stem
 - bean root
 - maize stem
 - maize root
47. Which one of the following statement is wrong?
- Epidermal cells are living; chloroplasts are usually present
 - Stele of dicot stem consists of pericycle, vascular bundles and pith
 - Secondary growth is present in dicot roots.
 - The vascular bundles of dicot stem are collateral and open.
48. Which of the following is/are correct?
- In monocot stem, the lowest metaxylem of a mature vascular bundle disintegrates forming a cavity.
 - Secondary growth is not possible in maize stem because of the absence of cambium.
 - Xylem parenchyma is present in the xylem of dicot stem
 - Phloem parenchyma is absent in the phloem of dicot stem.
- (a), (b) and (c)
 - (b) and (c)
 - (c) and (d)
 - (a) and (d)
49. Roots can be differentiated from the stem by
- presence of homogeneous cortex
 - presence of exarch xylem
 - presence of open collateral vascular bundle
 - presence of radial vascular bundle.
- (a), (b) and (d) only
 - (a) and (b) only
 - (c) and (d) only
 - (b) only
50. In monocot stem, the vascular bundles are
- Open; scattered; contains bundle sheath
 - Closed; scattered; contains starch sheath
 - Open; arranged like a ring; contains bundle cap.
 - Closed; scattered; contains bundle sheath.

51. Pith is present in
1. Dicot stem and dicot root
 2. monocot root and dicot stem
 3. dicot leaf and monocot root
 4. dicot root and dicot leaf
52. In one character, the dicot stem differs from monocot root. In the other character dicot stem is similar to monocot root. They are respectively
1. Presence of homogeneous cortex and Presence of collateral vascular bundle
 2. Presence of heterogenous cortex and Presence of exarch xylem.
 3. Presence of endarch xylem and Presence of medulla.
 4. Presence of unicellular root hair and Presence of radial vascular bundle.
53. Which of the following is / are wrong?
- a) Open vascular bundle takes part in secondary growth.
 - b) Cambium is present outer to the phloem in the vascular bundle of dicot stem.
 - c) The vascular bundle with cambium is called open vascular bundle.
 - d) Hard bast is present outer to the phloem in the vascular bundle of dicot stem.
1. (b) only
 2. (a) and (d)
 3. (b), (c) and (d)
 4. (c) and (d)
54. Which one of the following is not correctly matched?
1. Companion cells - specialised parenchyma
 2. Endodermal cells - barrel shaped collenchyma
 3. Guard cells - kidney shaped cells
 4. Epidermis of monocot stem - rectangular shaped cells
55. Arrange the cells in correct order that are seen in the anatomy of sunflower stem.
- | | |
|------------------|-----------------|
| a) Starch sheath | b) Epidermis |
| c) Parenchyma | d) Collenchyma |
| e) Bundle cap | f) Chlorenchyma |
| g) Xylem | h) Cambium |
| i) Pith | j) Phloem |
1. b, d, c, f, a, e, g, h, i, j
 2. b, d, f, c, e, a, i, g, h, j
 3. b, d, f, c, a, e, i, h, g, j
 4. b, d, f, c, a, e, j, h, g, i
56. The hypodermis of monocot stem is made up of
1. collenchyma cells only
 2. sclerenchyma interrupted by collenchyma
 3. chlorenchyma interrupted by sclerenchyma
 4. sclerenchyma interrupted by chlorenchyma
57. The phloem of maize stem is made up of
1. sieve tubes, companion cells and phloem fibres
 2. sieve tubes and companion cells
 3. sieve tubes and phloem parenchyma
 4. phloem parenchyma and phloem fibres
58. Starch sheath of sunflower stem is homologous to
1. rhizodermis of roots
 2. pericycle of roots
 3. endodermis of roots
 4. bundle sheath of monocot stem
59. Eustele refers to
1. xylem surrounding phloem
 2. vascular bundles are arranged in a ring around the pith
 3. phloem surrounds xylem
 4. xylem and phloem arranged in different radii
60. Which one of the following is not true?
1. Dicot plants have dorsiventral leaf.
 2. The lower epidermis of leaf is generally discontinuous.
 3. The ground tissue of leaf is mesophyll tissue.
 4. The main function of spongy parenchyma is photosynthesis.
61. A layer of parenchyma cells surrounding each vein in leaves is called
1. palisade parenchyma
 2. spongy parenchyma
 3. border parenchyma
 4. stellate parenchyma
62. The vascular bundle of dicot leaf is
1. collateral and open
 2. radial and open
 3. collateral and closed
 4. collateral and exarch
63. Which one of the following statement is not correct?
1. In conjoint vascular bundle, xylem and phloem are arranged in the same radius.
 2. In amphivasal vascular bundle, xylem is surrounded by phloem
 3. In amphicribal vascular bundle, phloem surrounds xylem.
 4. In bicollateral vascular bundle phloem is found on both the sides of the xylem.
64. The parenchyma cells containing chloroplasts and the parenchyma cells containing air cavities are respectively
1. Aerenchyma and Chlorenchyma
 2. Collenchyma and Aerenchyma
 3. Chlorenchyma and Aerenchyma
 4. Collenchyma and Sclerenchyma

65. Find out the correct statements.
- Periderm is the secondary permanent tissue
 - Cortex and pith belong to fundamental system. They are made up of only simple tissues.
 - Primary permanent tissues are formed from apical meristem.
 - Xylem, Phloem, Pericycle and pith belong to vascular system.
- (a) and (b)
 - (a) and (c)
 - (a), (b) and (c)
 - (a), (b), (c) and (d)
66. The innermost layer of cortex of dicot root and the outermost layer of stele of dicot root are respectively
- Endodermis and Pericycle
 - Starch sheath and Pericycle
 - Pericycle and Endodermis
 - Endodermis and Bundle sheath
67. Analyse the following statements and find out the correct answer.
- Protoxylem lacuna is found in the vascular bundle of monocot stem.
 - The mesophyll tissue is differentiated in dicot leaves.
 - The mesophyll of isobilateral leaf is made up of palisade parenchyma and spongy parenchyma.
 - The veins of leaf contain vascular tissues.
- only b is correct
 - b and c are correct
 - only c is wrong
 - a and d are wrong
68. The primary vascular tissues and secondary vascular tissues are developed respectively from
- Apical meristem and intercalary meristem
 - Intercalary meristem and lateral meristem
 - Procambium and cork cambium
 - Procambium and vascular cambium
69. Which one of the following statement on lamellar collenchyma is correct?
- only the radial walls of thickened
 - the tangential walls of collenchyma are devoid of thickening
 - only the walls bordering the intercellular spaces are thickened.
 - only the tangential walls are thickened and the radial walls are devoid of thickening.
70. The simple dead tissue containing a narrow lumen and the complex dead cell containing a broad lumen are respectively
- fibres and tracheids
 - sclereids and sieve tubes
 - parenchyma and companion cell
 - collenchyma and vessels
71. The similarity between tracheids and fibres are
- Both are dead cells
 - Both have lignified secondary wall
 - Both have simple and bordered pits.
 - Both are polygonal in their cross section.
 - Both are simple tissues
 - Both have a narrow lumen
- (a) and (c)
 - (a), (b) and (d)
 - (a), (b) and (e)
 - (a), (b), (c), (d) and (f)
72. Xylem is considered as a complex tissue because
- It has many cells, performing different functions.
 - It conducts water.
 - It arises from the cambium.
 - It has four types of cells, performing a common function.
73. The companion cells remain connected to the sieve tube through
- pore
 - cytoplasm
 - pits
 - nucleus
74. Companion cells differ from sieve elements in
- Companion cells are living; but sieve elements are dead
 - Companion cells have cytoplasm with a prominent nucleus; but matured sieve elements have a lining layer of cytoplasm with no nucleus.
 - Companion cells are seen only in gymnosperms; but sieve elements are seen only in angiosperms.
 - Companion cells have thick primary wall while sieve elements have thin walls.
75. Conjunctive tissue of maize root is made up of
- parenchyma
 - sclerenchyma
 - collenchyma
 - chlorenchyma