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BIOLOGY

BOOKS - AAKASH SERIES

HISTOLOGY AND ANATOMY OF FLOWERING PLANTS

Exercise I The Tissues

1. Meristems are

A. Mature cells

B. Well differentiated cells

C. Embryonal cells

D. None of these

Answer: C

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2. Interfascicular cambium is

A. Primary meristem

B. Secondary meristem

C. Abnormal meristem

D. None of these

Answer: B

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3. Intercalary meristem occurs mainly in

A. Some dicot leaves

B. Some monocot stems

C. In all monocot stems

D. Dicot stem and roots

Answer: B

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4. Meristematic activities are best seen in

A. Fruit

B. Root and shoot apices

C. At leaf tips

D. All of these

Answer: B

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5. Apical, intercalary and lateral meristems are recognised on the basis of their

A. Specific function

B. Position

C. Mode of formation

D. None of these

Answer: B

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6. Primary meristems are those which originate

A. Since birth from embryonal tissue

B. During secondary meristem

C. By dedifferentiation

D. None of the above

Answer: A

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7. Examples of lateral meristem

A. Fascicular cambium

B. Inter fascicular cambium

C. Cork cambium

D. All

Answer: D

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8. Tissue is made up of group of

A. living cells only

B. dead cell only

C. both dead and living cells

D. All

Answer: D

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9. Examples of dead cells are

A. Cork cells, sclerides, Fibers, Xylem ressels

B. Velamen cells, cork cells, collenchyma cells, xylem

C. Xylem tracheids, vessels, fibres and xylem parenchyma

D. All of the above

Answer: A

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10. Lignified tissues are

A. Permeable for gases, solutes and solvents

B. Provided with simple or bordered pits

C. Meant for mechanical strength or conduction

D. All of the above

Answer: D

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11. Collenchyma is capable of providing mechanical strength because of having

A. Thick lignification

B. Thick cuticularization

C. Thick suberization

D. More thickened corners

Answer: D

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12. Bast fibres are obtained from

A. Epidermis

B. Seed surface

C. Phloem

D. Pith

Answer: C

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13. Parenchyma cells are associated with acitivity like

A. Assimilation and storage

B. Conduction

C. Dedifferentiation

D. All of these

Answer: D

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14. The living components of xylem are:

A. Xylem tracheids

B. Xylem vessels

C. Xylem fibres

D. Xylem parenchyma

Answer: D

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15. Collenchymatous hypodermis is found in

A. Dicot stem

B. Monocot stem

C. Dicot roots

D. Monocot leaf

Answer: A

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16. Lignin is most abundant in

A. Collenchyma

B. Xylem

C. Phloem

D. Chlorenchyma

Answer: B

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17. At maturity, sieve tubes do not possess

A. Cell wall

B. Nucleus

C. Cytoplasm

D. Vacuoles

Answer: B

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18. Companion cells are

A. Sclerenchymatous in nature

B. Parenchymatous in nature

C. Meant for conduction of food

D. None of these above

Answer: B

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19. Sieve tube is

A. Vessel like structure

B. Provided with oblique septa

C. Main conducting element for translocation of food

D. All of the above

Answer: D

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20. Complex tissues are

A. 1)Xylem and phloem

B. 2)Heterogeneous tissues

C. 3)Conductive tissues

D. 4)All of these

Answer: D

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21. Xylem vessels are not found in

A. Pteridophytes

B. Gymnosperms

C. Bryophytes

D. All the above

Answer: D

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22. Albuminous cells of gymnosperms are equivalent to

A. Sieve tubes

B. Sieve cells

C. Companion cells

D. Cork cambium

Answer: C

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23. Centrifugal development of xylem is

A. Stem

B. Root

C. Lateral root

D. None of these

Answer: A

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24. Living cells showing mechanical function

A. Sclerenchyma

B. Stone cells

C. Aerenchyma

D. Collenchyma

Answer: D

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25. Cells are less lignified in

A. Xylem tracheids

B. Phloem fibres

C. Xylem vessels

D. Hard fibers

Answer: B

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26. Example for primary meristem

A. Apical meristem

B. Inter calarymeristem

C. Fascicular cambium

D. All

Answer: D

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27. Lateral meristem is

A. Procambium and phelloderm

B. Interfascicular and phelloderm

C. Phellogen and phelloderm

D. Phellogen and fascicular cambium

Answer: D

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28. Thickening material present in wall of collenchyma is

A. Cellulose

B. Hemi cellulose

C. Pectin

D. All

Answer: D

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29. What do you mean by closed vascular bundles

A. Cambium present

B. Cambium absent

C. Periderm absent

D. None of these

Answer: B

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30. During the formation of the primary plant body specific regions of apical meristem produces

A. Dermal tissues

B. Ground tissues

C. Vascular tissues

D. All

Answer: D

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31. Which one of the following is not a lateral meristem ?

A. Interfascicular cambium

B. Fascicular cambium

C. Phellogen

D. Intercalary meristem

Answer: D

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32. Select the true statement

A. All apical meristems are lateral

B. All lateral meristems are secondary

C. All secondary meristems are lateral

D. All intercalary meristems are secondary

Answer: C

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33. "Curly top" of tobacco is caused by "A"and it spreads through a plant via "B". A and B are

A. Bacteria and cell sap

B. Virus and Xylem

C. Fungi and Phloem

D. Virus and Phloem

Answer: D

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34. A tissue made up of only one type of differentiated cells is

A. Meristem

B. Phloem

C. Xylem

D. Parenchyma

Answer: D

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35. Simple tissues is/are

A. Parenchyma

B. Collenchyma

C. Sclerenchyma

D. All

Answer: D

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36. The seed coats of legumes are hard due to

A. Meristem

B. Fibers

C. Collenchyma

D. Sclereids

Answer: D

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37. Conjoint, collateral, endarch and closed vascular bundles are found in

A. All stems and leaves

B. Only the leaves of dicot and monocot plants

C. Leaves and stems of monocot plants only

D. Monocot stems, leaves of dicot and monocot plants

Answer: D

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38. The cell structure present in collenchyma but absent in sclerenchyma is

A. Lignified cell walls

B. Unevenly thicked cell walls

C. Vacuoles

D. Pits in cell wall

Answer: C

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39. Presence of xylem vessels is a characteristic feature of

A. Thallophytes

B. Pteridophytes

C. Gymnosperms

D. Angiosperms

Answer: D

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40. The type of meristem absent in most of the monocot plants

A. Apical meristems

B. Intercalary meristems

C. Lateral meristems

D. Both 1 and 2

Answer: C

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41. The position of root apical meristem is

A. Behind central cylinder

B. Subterminal

C. Lateral

D. Behind cambium

Answer: B

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42. Interfascicular cambium and cork cambium are

A. Embryonic meristems

B. Intercalary meristems

C. Lateral meristems

D. Primary meristems

Answer: C

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43. Collenchyma differs from sclerenchyma in

A. Wide lumen

B. presence of

C. Protoplasm at maturity

D. Uniformly thick cell walls

Answer: B

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44. Choose the character unrelated to parenchyma

A. It is made up of similar type of cells

B. It has thick lignified secondary cell walls

C. It is chiefly useful for storage of food

D. It is with or without intercellular spaces

Answer: B

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45. According to Esau which virus is transported through phloem

A. Bunchy top virus

B. Curly top virus

C. Tungro virus

D. TMV

Answer: B

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46. Which book of Esau is refierred as Webster.s of plant biology

A. Plant anatomy

B. Anatomy of seed plants

C. Anatomy of vascular plants

D. Anatomy of flowering plants

Answer: B

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47. Highly thickened wall and very narrow lumen are characteristic features of

A. Sclerenchyma

B. Fibres

C. Collenchyma

D. Parenchyma

Answer: B

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48. Simple tissue present in mesocarp, endocarp of Cocos drupe is

A. Parenchyma

B. Collenchyma

C. Sclerenchyma

D. Meristem

Answer: C

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49. The swollen petiole of Eichhornia is made up of

A. Sclerenchyma

B. Meristem

C. Aerenchyma

D. Collenchyma

Answer: C

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50. Jute, Flax, Hemp fibres are morphologically

A. Pericyclic fibres

B. Xylem fibres

C. Phloem fibres

D. Medullary fibres

Answer: C

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51. Enucleated living plant cells are

A. RBC

B. Tracheids

C. Mature sieve elements

D. Companion cells

Answer: C

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52. Function of companion cells is

A. Conduction

B. Maintaining pressure gradient in sieve tube element

C. Mechanical support

D. No specific function

Answer: B

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53. Enucleated living cells found in the angiospermic plant body are

A. Companion cells

B. Mature sieve tube elements

C. Vessels

D. Tracheids

Answer: B

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54. Pholem parenchyma is absent in

A. Pea

B. Maize

C. Hibiscus

D. Datura

Answer: B

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55. Cells of collenchyma differ from parenchyma cells mainly in

A. Lacking protoplasm

B. Possesing unevenly thickened walls

C. Containing chloroplasts

D. Being meristematic

Answer: B

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56. The type of meristems occurring in grasses and regenerate parts removed by grazing herbivores

A. Intercalary meristems

B. Lateral meristems

C. Secondary meristems

D. Cork cambium

Answer: A

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57. Albuminous cells of phloem in gymnosperms are analogous to

A. Parenchyma of phloem in Dicots

B. Parenchyma of phloem in monocots

C. Companion cells of phloem in angiosperms

D. Sieve tube elements of phloem in angiosperms

Answer: C

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58. These are cylindrical meristems

A. Cork cambium

B. Inter fascicular cambium

C. Fascicular vascular cambium

D. Apical meristems

Answer: D

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59. Phloem does not have parenchyma in

A. Monocot stem

B. Dicot stem

C. Dicot root

D. Dicot leaf

Answer: A

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60. Chief food conducting cells of phloem in gymnosperm are

A. Sieve cells

B. Sieve tubes

C. Companion cells

D. Sieve tube elements

Answer: A

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61. Axillary bud is constituted by

A. Lateral meristem, because axillary buds are located laterally

B. Entire shoot apical meristem

C. Some cells left behind from shoot apical meristem

D. Secondary meristem

Answer: C

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62. Cell walls show unevenly thickened hypodermis in

A. Maize

B. Sunflower

C. Jowar

D. Bajra

Answer: B

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63. Storage tissue is

A. Collenchyma

B. Parenchyma

C. Sclerenchyma

D. Phloem

Answer: B

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64. Metabolical mechanical tissue is

A. Chlorenchyma

B. Sclerenchyma

C. Parenchyma

D. Collenchyma

Answer: D

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65. The fruit walls of nuts are hard due to

A. Fibres

B. Parenchyma

C. Sclereids

D. $CaCO_3$ crystals

Answer: C

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66. Simple tissue with lignification is

A. Parenchyma

B. Sclerenchyma

C. Collenchyma

D. Xylem

Answer: B

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67. Bulk portion of primary organs in plants is made up of

A. Collenchyma

B. Parenchyma

C. Sclerenchyma

D. Vascular tissue

Answer: B

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68. Collenchyma is useful

A. To provide mechanical support to the young aerial parts of Dicots

B. To perform photosynthesis

C. For food conduction

D. 1 & 2

Answer: D

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69. Apical, intercalary and lateral meristems are recognised on the basis of their

A. Function

B. Position

C. Plane of division

D. All

Answer: B

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70. Non metabolical mechanical tissue is

A. Collenchyma

B. Xylem

C. Sclerenchyma

D. Parenchyma

Answer: C

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71. Which meristem bring about increase in the girth of trees?

A. Length

B. Diameter

C. 1 & 2

D. 1 or 2

Answer: B

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72. Lateral meristems that are formed by dedifferentiation are

A. Cork cambium

B. Inter fascicular cambium

C. Fascicular cambium

D. 1 & 2

Answer: D

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73. A primary meristem that produces secondary tissues is

A. Apical meristem

B. Cork cambium

C. Inter fascicular cambium

D. Fascicular vascular cambium

Answer: D

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74. Component of phloem which is absent in most of the monocots is

A. Sieve tubes

B. Companion cells

C. Phloem fibres

D. Phloem parenchyma

Answer: D

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75. Living elements of xylem are

A. Tracheids

B. Vessels

C. Xylem fibres

D. Xylem parenchyma

Answer: D

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76. Who was the director of Anatomy and Morphology, Missouri Botanical garden

A. Dr.K.Esau

B. Hanstein

C. Peter Raven

D. Nageli

Answer: C

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77. Meristematic cells are

A. thin walled, isodiametric, large nucleate and less protoplasmic.

B. thin walled, isodiametric, large nucleate and dense protoplasmic

C. thick walled, isodiametric, non-nucleate and dense protoplasmic

D. thick walled, columnar, large nucleate and dense protoplasmic

Answer: B

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78. Which of the following tissue/s can regain the power of multiplication?

A. Parenchyma

B. Collenchyma

C. Sclerenchyma

D. Parenchyma and Collenchyma

Answer: D

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79. Collenchyma can be differentiated from parenchyma by

A. Cellulosic wall

B. Living protoplasm

C. Pecto-cellulosic deposits at corners

D. No protoplasm

Answer: C

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80. The word .pit. in plant histology means

A. A thickened area in secondary wall

B. An unthickened area in secondary wall

C. A callose pad on sieve plate

D. A cyclose the vessel

Answer: B

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81. A mature sieve tube differs from a vessel in

A. In lacking a functional nucleus

B. In the absence of lignified walls

C. In lacking cytoplasm

D. In having nucleus

Answer: B

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82. The function of companion cells is to

A. Providing energy to sieve elements for active transport

B. Loading of sucrose into sieve elements by passive transport

C. Providing water to phloem

D. Loading of sucrose into sieve tube elements by active transport

Answer: D

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83. Lateral meristems are active in

A. Mature parts of stem and root

B. Growing tips of main stem

C. In between mature tissues

D. Root apex

Answer: A

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84. Rejuvenation of growth of cut grass is accomplished by

A. Apical meristems

B. Intercalary meristems

C. Lateral meristems

D. Cylindrical meristems

Answer: B

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85. Which of following is found as sub epidermal tissue in young stem, leaf petioles of dicots

A. Parenchyma

B. Cambium

C. Collenchyma

D. Conjunctive tissue

Answer: C

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86. Vascular bundles of Gymnosperms do not have

A. Seive tubes, companion cells and vessels

B. Tracheids, sieve tubes, parenchyma

C. Fibres, parenchyma, seive cells

D. Albuminous cells, vessels, tracheids

Answer: A

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87. In the sieve tubes pressure gradient is maintained with the help of

A. Phloem fibres

B. Phloem parenchyma

C. Sieve cells

D. Companion cells

Answer: D

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88. Phloem parenchyma differs from xylem parenchyma in storing

A. Resin, latex, mucilage

B. Gums, proteins, starch

C. Fats and tanins

D. Proteins, fats, starch

Answer: A

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89. Complex tissues are not found in:

A. Amphibians of plant kingdom

B. First sporophyll bearing plants

C. Primitive seed bea plants

D. Highly evolved seed bearing plants

Answer: A

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90. Mature sieve tube has

A. Nucleus

B. Cytoplasm only

C. Nucleus and cytoplasm

D. None of these

Answer: B

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91. Living mature cell which lacks nucleus is

A. Xylem vessel

B. companion cells

C. Sieve cells

D. None of these

Answer: B

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92. Phloem parenchyma is absent in

A. leaf of monocot

B. Leaf of dicot

C. Stem of Monocot

D. All

Answer: D

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93. Vessels and companion cells are characteristic feature of

A. Angiosperm

B. Gymnosperm

C. Bryophyta

D. All

Answer: D

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94. All are cylindrical meristems except

A. Apical meristems

B. Intercalary meristems

C. All primary meristems

D. Lateral meristems

Answer: D

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95. Simple tissue that is not formed from vascular cambium is

A. Collenchyma

B. Sclerenchyma

C. Parenchyma

D. Meristem

Answer: A

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Exercise I The Tissues Systems

1. Guard cells of stomata are very closely associated with

A. Subsidiary cells

B. Complementary cells

C. Epithem

D. Epidermal cells

Answer: A

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2. Sunken stomata are found in

A. Leaflets of Cycas

B. Pinus needles

C. Nerium leaves

D. All of these

Answer: D

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3. Stomata are not found on the leaves of

A. Submerged hydrophytes

B. Attached floating hydrophytes

C. Marshy hydrophytes

D. All of the above

Answer: A

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4. Bicollateral vascular bundles are

A. Always open

B. Provided with bundle sheath

C. Devoid of companion cells in phloem element

D. Bundles with a phloem group

Answer: A

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5. Vascular bundles are called radial when

A. On different radii

B. On the same radius

C. Both (1) and (2)

D. none of these

Answer: A

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6. Conjoint collateral and open vascular bundles with xylem endarch occur in stem of

A. Dracaena

B. Maize

C. Wheat

D. Helianthus

Answer: D

Watch Video Solution

7. Conjoint and open vascular bundles are seen in

A) Dicot stem

B) Monocot stem

C) Dicot leaf

D)Monocot leaf

A. A, B only

B. A only

C. C, D only

D. B, C only

Answer: B

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8. Root hairs are

A. Unicellular branched

B. Unicellular unbranched

C. Multicellular uniseriate

D. Multicellular multiseriate

Answer: B

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9. The outermost layer of the primary plant body is made up of

A. Collenchyma

B. Sclerenchyma

C. Parenchyma

D. Aerenchyma

Answer: C

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10. The guard cells of the stomata present in the epidermis of grasses are

A. Dumb-bell shaped

B. Rounded

C. Elliptical

D. Kidney shaped

Answer: A

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11. Which of the following is not part of epidermal tissue system ?

A. Trichomes

B. Companion cells

C. Subsidiary cells

D. Guard cells

Answer: B

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12. Ground tissues includes

A. All tissues except epidermis and vascular bundles

B. Epidermis and cortex

C. All tissues internal to epidermis

D. only vascular tissues

Answer: A

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13. Stomatal apparatus consists of

A. 1)Stomatal pore

B. 2)Guard cells

C. 3)Subsidiary cells

D. 4)All of these

Answer: D

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14. In leaves, the ground tissue comprises of

A. Mesophyll,vascular bundles only

B. Only vascular bundles

C. Only mesophyll

D. Xylem fibres, phloem fibres & Sclereids only

Answer: C

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15. The vascular tissue system is mainly made up of

A. Meristematic tissue

B. Simple tissue

C. Complex tissues

D. Both 1 and 3

Answer: C

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16. Bicollateral vascular bundles are found in the stems of

A. Cucurbita

B. Helianthus

C. Solanum

D. 1 and 3

Answer: D

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17. Radial vascular bundles are found in :

A. Dicot root

B. Monocot stem

C. Dicot stem

D. Isobilateral leaf

Answer: A

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18. The ratio of phloem strips, xylem strips and cambial strips found in bicollateral vascular bundle of Solanum

A. $1:1:1$

B. $2:2:2$

C. $2:2:1$

D. $2:1:2$

Answer: D

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19. Dermal tissues, ground tissues and vascular tissues are formed from

A. Intercalary meristems

B. Apical meristems

C. Fascicular vascular cambium

D. Inter fascicular cambium

Answer: B

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20. Dumbell shaped guard cells are found in

A. Datura

B. Solanum

C. Grasses

D. Hibiscus

Answer: C

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21. The following is not a part of ground tissue system in stem

A. Medulla

B. Medullary rays

C. Pericycle

D. Mesophyll

Answer: D

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22. When patches of phloem occur on both sides of xylem, then vascular bundle is called as

A. Radial

B. Collateral

C. Bicollateral

D. Concentric

Answer: C

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23. Endodermis is a part of

A. Extra-stelar tissue system

B. Vascular Tissue system

C. Epidermal Tissue System

D. Ground Tissue system

Answer: D

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24. Ground tissue system is made up of

A. Parenchyma only

B. Collenchyma only

C. Sclerenchyma only

D. All types of simple tissues

Answer: D

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25. In radial vascular bundles the xylem and phloem lie

A. Xylem and phloem are on same radius

B. Xylem and phloem are on alternating with each other

C. Xylem and phloem are separated by meristem (cambium) barate radii

D. Xylem and phloem are one around the other

Answer: B

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26. Unrelated character regarding Trichomes in the shoot system is

A. Multicellular structures

B. Prevent in water loss

C. Absorbption of water

D. Branched or unbranched structures

Answer: C

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27. Bicollateral vascular bundles are found in

A. Cucurbita

B. Dracaeana

C. Helianthus

D. Zea mays

Answer: A

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28. Stomatal apparatus consists of

A. Guard cells only

B. Subsidiary cells only

C. Stomatal pore only

D. All the above

Answer: D

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29. The ground tissue of dicot leaf is

A. Medulla

B. Medullary rays

C. Pericycle

D. Mesophyll

Answer: D

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30. The criterion for the classification of tissue systems into three types is

A. Based on their structure only

B. Based on their function

C. Based on their location in the plant body only

D. Both 1 and 3

Answer: B

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31. Ground tissue system mainly consists of

A. Epidermis, epidermal hairs, stomata, epiblema and root hairs

B. Hypodermis, cortex, endodermis, pericycle and pith

C. Xylem and phloem

D. Meristems

Answer: B

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32. Epidermal tissue system does not include

A. Trichomes and hairs

B. Guard cells and subsidiary cells

C. Cuticle layer and cutinised walls

D. Collenchyma and sclerenchyma

Answer: D

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33. Closed vascular bundles lack

A. Cambium

B. Xylem

C. Pholem

D. Parenchyma

Answer: A

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34. Guard cell help in :

A. Fighting against infection

B. Protection against grazing

C. Transpiration

D. Guttation

Answer: C

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35. Find the mismatch of the following

A. Epidermis – Cells are elongated and compactly arranged

B. Cuticle -Protection

C. Guard cell - Bean shaped in Grasses

D. Guard cells - Specialized

Answer: C

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36. Epidermal hairs present on the stem are called as

A. Ramenta

B. Trichomes

C. Indusium

D. Scale leaves

Answer: B

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37. In land plants, the guard cells differ from other epidermal cell in having

A. Chloroplasts

B. Mitochondria

C. Nucleus

D. Lysosomes

Answer: A

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38. Ground tissue is present

A. in the vascular bundles of dicot stem

B. in the vascular bundles of monocot stem

C. in between xylem and phloem of radial vascular bundles

D. in leaf bundles

Answer: C

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39. Trichomes are

A. epidermal structures of root

B. appendages of pericycle of stem

C. epidermal outgrowths of dicot stem

D. hypodermal structures of dicot stem

Answer: C

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40. Ground tissue system mainly consists of

A. Meristem

B. Collenchyma

C. Sclerenchyma

D. Parenchyma

Answer: D

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41. All types of tissue systems have

A. Collenchyma

B. Sclerenchyma

C. Meristems

D. Parenchyma

Answer: D

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Exercise I Anatomy Of Dicotyledonous And Monocotyledonous Plants

1. Casparian strip is a characteristic feature of

A. Pericycle

B. Endodermis

C. Xylem tracheids

D. Sieve tubes

Answer: B

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2. Bulliform cells are found in the leaves of

A. Vallisneria

B. Maize

C. Nerium

D. Opuntia

Answer: B

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3. Casparian strips of endodermis has deposition of

A. Waxy materials

B. Lignin or pectin

C. Suberin

D. Chitin

Answer: C

Watch Video Solution

4. Passage cells are found in

A. Pericycle

B. Xylem element

C. Phloem element

D. Endodermis

Answer: D

Watch Video Solution

5. Stele includes

A. Xylem and phloem

B. Xylem, phloem, pericycle, pith

C. Xylem, phloem, pith only

D. Xylem, phloem, endodermis

Answer: B

Watch Video Solution

6. Exarch xylem is found in

A. Dicot and monocot root

B. Monocot stem only

C. Dicot stem only

D. Petioles

Answer: A

Watch Video Solution

7. The stomata in an isobilateral leaf

A. Present only on the adaxial epidermis

B. Present only on the abaxial epidermis

C. Absent on both the surfaces of epidermis

D. Present on both the surfaces of the epidermis

Answer: D

Watch Video Solution

8. In a monocot root xylem condition is

A. Monarch

B. Triarch

C. Tetrarch

D. Polyarch

Answer: D

Watch Video Solution

9. Outer most layer of stele in the root is

A. Endodermis

B. Pericycle

C. Xylem bundles

D. Conjuctive tissue

Answer: B

Watch Video Solution

10. In roots conjunctive tissue lies in between

A. Epidermis and Endodermis

B. Endodermis and Pericycle

C. Xylem and Phloem

D. Protoxylem and Metaxylem

Answer: C

Watch Video Solution

11. Pericycle is present in the form of semilunar patch of sclerenchyma in

A. Monocot root of Sorghum

B. Dicot root of Cicer

C. Dicot stem of Helianthus

D. Monocot Stem of Zea

Answer: C

Watch Video Solution

12. Lysigenous cavities present in vascular bundles of

A. Monocot stem

B. Dicot root

C. Dicot

D. Dicot leaf

Answer: A

Watch Video Solution

13. Bulliform cells are found in

A. The epidermis of monocot stem

B. The adaxial epidermis of grass leaf

C. Abaxial epidermis of dicot leaf

D. The adaxial epidermis of dorsiventral leaf

Answer: B

Watch Video Solution

14. Character not related to anatomy of dicot leaf

A. Stomatal frequency is more in lower epidermis than upper epidermis

B. Heterogenous mesophyll

C. Phloem towards abaxial epidermis

D. Vascular bundle provided with scleren- chymotous bundle sheath

Answer: D

Watch Video Solution

15. Presence of collenchymatous hypodermis is one of the important character of

A. Monocot root

B. Monocot leaf

C. Dicot stem

D. Monocot stem

Answer: C

Watch Video Solution

16. Structures involved in radial conduction in primary dicot stem are

A. Vascular bundles

B. Vascular rays

C. Medullary rays

D. Conjunctive tissue

Answer: C

Watch Video Solution

17. Peripheral protoxylem and central metaxylem is

A. Endarch and found in stems

B. Exarch and found in stems

C. Endarch and found in roots

D. Exarch and found in roots

Answer: D

Watch Video Solution

18. A waxy layer present outside the epidermal cells is absent in

A. Roots

B. Monocot leaves

C. Dicot Leaves

D. Dicot stems

Answer: A

Watch Video Solution

19. The following tissue is mostly present below epidermis in aerial parts of dicots

A. 1)Parenchyma

B. 2)Xylem

C. 3)Collenchyma

D. 4)Sclerenchyma

Answer: C

Watch Video Solution

20. Which of the following constitute endodermis and pericycle respectively, in a monocot root?

A. Innermost layer of cortex and outermost layer of cortex

B. Innermost layer of stele and outermost layer of stele

C. Innermost layer of stele and outermost layer of cortex

D. Innermost layer of cortex and outermost layer of stele

Answer: D

Watch Video Solution

21. The part of a root with intercellular spaces is

A. Cortex

B. Epidermis

C. Endodermis

D. Pericycle

Answer: A

Watch Video Solution

22. Monocot root differs from dicot root in having

A. More than six xylem bundles

B. Pericycle

C. Endodermis

D. Showing secondary growth

Answer: A

Watch Video Solution

23. The vascular bundles in monocot stem in general

A. 1)larger at periphery and smaller at the center

B. 2)smaller at periphery and larger at the center

C. 3)large and smaller together at periphery

D. 4)large and smaller together at the center

Answer: B

Watch Video Solution

24. Ring like arrangement of large number of vascular bundles is seen in

A. Dicot root

B. Monocot stem

C. Dicot stem

D. Monocot root

Answer: C

Watch Video Solution

25. Protoxylem lacuna are present in the vascular bundles of

A. 1)Monocot stem

B. 2)Monocot root

C. 3)Dicot stem

D. 4)Dicot root

Answer: A

Watch Video Solution

26. Trichomes (or) root hairs are absent in the epidermis of

A. Dicot stem

B. Monocot stem

C. Dicot root

D. Monocot root

Answer: B

Watch Video Solution

27. Semi lunar patches of sclerenchyma are seen

A. Above phloem in monocot stem

B. Below phloem in monocot stem

C. Above phloem in dicot stem

D. Below phloem in dicot stem surrounded by

Answer: C

Watch Video Solution

28. Vascular sclerenchymatous bundle sheath in

A. Monocot stem bundles are

B. Dicot stem

C. Monocot root

D. Dicot root

Answer: A

Watch Video Solution

29. Exarch arrangement of primary xylem means

A. Protoxylem lies towards periscycle and metaxylem lies towards medulla

B. Protoxylem lies towards pith and metaxylem lies towards pericycle

C. Protoxylem lies on either side of metaxylem of the organ

D. Metaxylem lies on either side of protoxylem of the organ

Answer: A

Watch Video Solution

30. Monocot root is not characterised by

A. Polyarch condition

B. Exarch xylem

C. Well developed medulla

D. Secondary growth

Answer: D

Watch Video Solution

31. Pith is well developed in

A. Dicot stem and dicot root

B. Dicot stem and monocot root

C. Monocot root and monocot stem

D. Monocot stem and dicot root

Answer: B

Watch Video Solution

32. The transverse section of a plant material shows the following anatomical features

1) The vascular tissues are arranged in an alternate manner on different radii

2) The pith is small (or) inconspicuous What will you identify it as?

A. Sunflower root

B. Maize stem

C. Sugar cane leaf

D. Sorghum root

Answer: A

Watch Video Solution

33. Which of the following is present in a monocot stem ?

A. 1)Phloem parenchyma

B. 2)Medullary rays

C. 3)Pericycle

D. 4)Xylem parenchyma

Answer: D

Watch Video Solution

34. The number of types of cells present in the adaxial epidermis of grasses

A. 1

B. 2

C. 3

D. 4

Answer: D

Watch Video Solution

35. Generally number of types of cells present in lower epidermis of leaf of grasses is

A. 3

B. 4

C. 2

D. 1

Answer: A

Watch Video Solution

36. The function of exodermis in the roots is

A. Prevents exit of water and helps in sec.growth.

B. Prevention of exit of water and protection

C. Prevention of exit of water and allowing entry of water

D. Storage of water and ford materials

Answer: B

Watch Video Solution

37. The function of pericycle in monocot root is

A. Initiation of lateral roots

B. Formation of vascular cambium

C. Formation of cork cambium

D. Both 1 and 2

Answer: A

Watch Video Solution

38. The number of xylem bundle in monocot root is :

A. Two

B. Four

C. Six

D. More than six

Answer: D

Watch Video Solution

39. In dicotyledonous roots, the lateral roots originate from

A. Endodermal cells

B. Cortical cells

C. Epidermal cells

D. Pericycle cells

Answer: D

Watch Video Solution

40. The common character in both dicot root and monocot root is the presence of

A. Large Medulla

B. Polyarch xylem

C. Cambial development at later stages

D. Radial vascular bundles

Answer: D

Watch Video Solution

41. Conjuctive tissue in roots is

A. Cortical tissue

B. Present between xylem & phloem

C. Produces lateral roots

D. Made of sclerenchymatous cells

Answer: B

Watch Video Solution

42. Cells with suberized walls and water impermeable are present in this layer of root

A. Epidermis

B. Pericycle

C. Endodermis

D. Hypodermis

Answer: C

Watch Video Solution

43. Cortex is bigger than stele in

A. Dicot stem and Monocot stem

B. Monocot root and Dicot root

C. Dicot stem and Monocot root

D. Monocot stem and Dicot root

Answer: B

Watch Video Solution

44. Stele is bigger than cortex in the stem of

A. Dicot stem

B. Monocot root

C. Dicot root

D. Both 2 & 3

Answer: A

Watch Video Solution

45. Select incorret pair

A. Stem of sunflower- Exarch xylem

B. Stem of maize -Endarch xylem

C. Root of gram -Exarch xylem

D. Root of jowar -Exarch xylem

Answer: A

Watch Video Solution

46. Large medulla is immediately surrounded by many protoxylem groups in the primary structure of

A. Dicot root

B. Monocot root

C. Monocot stem

D. Dicot stem

Answer: D

Watch Video Solution

47. Hypodermis provides mechanical support in

A. 1)Dicot root

B. 2)Dicot stem

C. 3)Monocot root

D. 4)All the above

Answer: B

Watch Video Solution

48. Select incorret pair

A. Stem of sunflower - Eustele

B. Stem of maize - Atactostele

C. Root of gram Exarch and Polyarch xylem

D. Root of sorghum Radial vascular bundle

Answer: C

Watch Video Solution

49. Polyarch and exarch condition is found in

(a) monocot stem

(b) monocot root

(c) dicot stem

(d) dicot root

A. Dicot root

B. Dicot stem

C. Monocot root

D. Monocot stem

Answer: C

Watch Video Solution

50. Leaves of angiosperms show these vascular bundles

A. Bicollateral

B. Conjoint and closed

C. Conjoint and open

D. Radial

Answer: B

Watch Video Solution

51. A cross section of a plant material shows four xylem patches alternating with same number of phloem patches and in the xylem protoxylem is pointed towards periphery. In the centre of stele a small pith is present. The plant material is

A. Young dicot stem

B. Young dicot root

C. Monocot stem

D. Monocot root

Answer: B

Watch Video Solution

52. Stele includes

A. 1)Endodermis, pericycle, xylem, phloem, cambium, pith and pith rays

B. 2)Pericycle, xylem, phloem, cambium, pith and pith rays

C. 3)Xylem, phloem, cambium, pith and pith rays only

D. 4)Xylem, phloem and cambium only

Answer: B

Watch Video Solution

53. Vascular bundles in a dicot leaf are

A. Collateral open with xylem towards lower epidermis and phloem towards upper epidermis

B. Collateral closed with xylem towards upper epidermis and phloem towards lower epidermis

C. Collateral closed with xylem towards lower epidermis and phloem towards upper epidermis

D. Radial

Answer: B

Watch Video Solution

54. Non cuticularised following

A. stem epidermis

B. branch epidermis is characteristic of

C. leaf epidermis

D. root epidermis

Answer: D

Watch Video Solution

55. Two to six exarch radial vascular bundles and little pith are found in

A. Monocot stem

B. Monocot root

C. Dicot leaf

D. Monocot leaf

Answer: B

Watch Video Solution

56. The innermost layer of in root cortex is characterised by

A. The radial walls are thickened by pecto cellulose band

B. The transverse walls are wrapped by suberised band

C. The radial walls are thickened by cutinised band

D. The transverse walls are thickened by chitinous band

Answer: B

Watch Video Solution

57. Pericycle is not at all concerned with

A. Production of lateral roots

B. Promoting secondary growth

C. Providing mechanical strength

D. Synthesis of carbohydrates

Answer: D

Watch Video Solution

58. Dicot leaf shows differential colouration between the two surfaces because of

A. Undifferentiated mesophyll

B. Presence of upper palisade and lower spongy parenchyma

C. Presence of upper spongy and lower palisade parenchyma

D. Presence of spongy parenchyma only

Answer: B

Watch Video Solution

59. The type of arrangement of xylem and phloem on alternate radii is described as

A. Radial

B. Diagonal

C. Pyramidal

D. Tangential

Answer: A

Watch Video Solution

60. Medulla is not organized in

A. Dicot stem

B. Monocot root

C. Dicot root

D. Monocot stem

Answer: D

Watch Video Solution

Exercise I Secondary Growth

1. Dedifferentiation occurs during the formation of

A. Cork cambium

B. Vascular cambium

C. 1 & 2

D. Sclerenchyma

Answer: C

Watch Video Solution

2. Impermeability is best seen in

A. Cork cells

B. Sclerenchyma

C. Stone cells

D. Collocytes

Answer: A

Watch Video Solution

3. Dendrochonology is used for determining the age of

A. fossils

B. Rocks

C. Trees

D. Annuals

Answer: C

Watch Video Solution

4. Periderm includes

A. Phellem, phellogen and phelloderm

B. Phellem and phellogen only

C. Phellogen and phelloderm only

D. Vascular and cork cambia only

Answer: A

Watch Video Solution

5. Vascular cambium in dicot roots is

A. Partly primary & partly secondary in origin

B. Completely secondary and formed from cortex

C. Completely primary and formed from pericycle

D. Formed partly from pericycle and partly from conjunctive tissue

Answer: D

Watch Video Solution

6. Which type of vascular bundles participate in normal secondary growth of stem

A. Radial vascular bundle

B. All types of Conjoint, Collateral vascular bundles

C. Conjoint, Collateral, Closed vascular bundle

D. Conjoint, Collateral, Open vascular bundle

Answer: D

Watch Video Solution

7. Secondary growth is usually absent in

A. Dicot root and Dicot stem

B. Monocot root and Monocot stem

C. Dicot root and Monocot stem

D. Monocot root and Dicot stem

Answer: B

Watch Video Solution

8. Annual ring is

A. Meristematic and produce secondary xylem and secondary phloem centripetally and centrifugally

B. Dead and produce secondary xylem and secondary phloem centripetally and centrifugally

C. Secondary xylem and secondary phloem produced by vascular cambium

D. Secondary xylem produced by vascular cambium

Answer: D

Watch Video Solution

9. During secondary growth of dicot root, origin of complete phellogen and partial vascular cambium is from

A. Conjunctive tissue

B. Endodermis

C. Pericycle

D. Cortex

Answer: C

Watch Video Solution

10. During secondary growth of dicot stem, the growth of the phloem rays in relation to vascular cambium is

A. Centripetal

B. Centrifugal

C. Acropetal

D. Concentric

Answer: B

Watch Video Solution

11. Entire vascular cambium is formed due to dedifferentiation during the secondary growth in

A. Dicot stem

B. Monocot stem

C. Dicot root

D. Monocot root

Answer: C

Watch Video Solution

12. The photosynthetic part of periderm that lies inner to phellogen is

A. Phellem

B. Wood

C. Periderm

D. Phelloderm

Answer: D

Watch Video Solution

13. A primary meristem that produces secondary tissues is

A. Inter fascicular cambium

B. Fascicular vascular cambium

C. Cork cambium

D. Apical meristems

Answer: B

Watch Video Solution

14. Vascular cambium ring of dicot stem is formed by

A. Primary meristem only

B. Secondary meristem only

C. Both primary and secondary meristem

D. Xylem and phloem

Answer: C

Watch Video Solution

15. Choose incorrect pair

A. Bark = Periderm + Bast

B. Periderm = Phellem + Phellogen + Phelloderm

C. Annual ring = Late wood + Early wood

D. Cortex = Pericycle + Vascular tissue + Pith

Answer: D

Watch Video Solution

16. Which part is derived from both vascular cambial ring and cork cambium during secondary growth in dicot stem?

A. Periderm

B. Bark

C. Cork

D. Bast

Answer: B

Watch Video Solution

17. During secondary growth in dicot stem complimentary cells are formed from

A. Interfascicular cambium

B. Vascular cambium

C. Phellogen

D. 2 and 3

Answer: C

Watch Video Solution

18. The parenchymatous cells found in lenticel are

A. Epithem

B. Phelloderm

C. Complementary cells

D. Cork tissue

Answer: C

Watch Video Solution

19. Which is the common part formed due to the activity of vascular cambium and phellogen.

A. Cork

B. Bast

C. Phelloderm

D. Bark

Answer: D

Watch Video Solution

20. In a woody dicot stem twenty spring woods and twenty autumn woods are present. What is the approximate age of that tree

A. 10 Years

B. 40 Years

C. 5 Years

D. 20 Years

Answer: D

Watch Video Solution

21. The study of estimation of age of the tree by counting the number of annual rings is called

A. Dendrology

B. Dendrochronology

C. Silviculture

D. Phenology

Answer: B

Watch Video Solution

22. Function of xylem ray parenchyma is

A. Upward conduction

B. Radial conduction

C. Downward conduction

D. 1 and 3

Answer: B

Watch Video Solution

23. Number of annual rings from base to apex of stem of dicot during secondary growth

A. Increases

B. Decreases

C. Remain same

D. 1 and 2

Answer: B

Watch Video Solution

24. Cork is impervious to water due to the presence of _____in its cell wall.

A. Cellulose

B. Hemicellulose

C. Pectin

D. Suberin

Answer: D

Watch Video Solution

25. Each annual ring (growth ring) consists of

A. Sapwood + Latewood

B. Heart wood + Early wood

C. Spring wood + Autumn wood

D. Heart wood + Sap wood

Answer: C

Watch Video Solution

26. A tree grows at a rate of 0.5 m/yr . What will be the height of a board fixed at 1.5 m above the base, five years ago

A. 4m

B. 3.5 m

C. 1.5 m

D. 4.5 m

Answer: C

Watch Video Solution

27. A hundred year old tree of temperate area will show

A. 100 rings from base to top

B. Irregular number of rings which show increase or decrease along the length

C. More than 100 rings at the base and less than 100 near the top

D. 100 rings at the base and progressive decrease towards the top

Answer: D

Watch Video Solution

28. In some old trees, though the central part (heart wood) is lost, the plant survives because

A. The bark conducts food and water

B. The sapwood conducts water and secondary phloem conducts food

C. The cork conducts water and sapwood conducts food

D. The water is conducted through sapwood and there is no conduction of food

Answer: B

Watch Video Solution

29. A hundred year old tree of temperate area will show

A. The same number of rings from base of trunk to the terminal region of branches

B. An irregular number of rings which increase or decrease sporadically along its length

C. About one hundred rings at the base with the number gradually decreasing towards the apex

D. About one hundred rings at the apex and the number gradually decreasing towards the base

Answer: C

Watch Video Solution

30. In a cut trunk of a tree the section was showing 26 concentric rings of spring wood and autumn wood in alternative layers. The age of the tree is estimated to be

A. 13 years

B. 26 years

C. 52 years

D. 104 years

Answer: B

Watch Video Solution

31. Highly durable and commercial valuable wood of the following is

A. Spring wood

B. Heart wood

C. Late wood

D. Sapwood

Answer: B

Watch Video Solution

32. Heart wood is durable and resistant to microbial attacks due to the deposition of

A. Tannins, resins and gums

B. Mineral crystals and oils

C. Starches, proteins and fats

D. Enzymes, hormones, acids

Answer: A

Watch Video Solution

33. Select mismatch from the following

A. Cork - Phellem

B. Secondary cortex- Phelloid

C. Cork cambium - Phellegen

D. Cork + Cork cambium + Secondary cortex- Periderm

Answer: B

Watch Video Solution

34. All of the following are component of bark except.

A. Cork

B. Periderm

C. Secondary xylem

D. Secondary phloem

Answer: C

Watch Video Solution

35. The secondary cambium develops partly from pericycle and partly form conjunctive tissue in

A. Monocot root

B. Monocot stem

C. Dicot stem

D. Dicot root

Answer: D

Watch Video Solution

36. Secondary growth commonly occurs in

A. Gymnosperms and Angiosperms

B. Dicot plans and Monocot plants

C. Gymnosperms and Dicot plants

D. Pteridophytes and Monocot plants

Answer: C

Watch Video Solution

37. The main role of vascular rays is

A. Lateral conduction of ergastic materials

B. Upward conduction of water and salts

C. Downward conduction of food materials

D. Radial movement of water and food

Answer: D

Watch Video Solution

38. The xylem vessels are relatively more in number in

A. Autumn wood

B. Late wood

C. Primary xylem

D. Spring wood

Answer: D

Watch Video Solution

39. Vascular cabium produces

A. Primary and secondary xylem

B. primary and secondary phloem

C. Primary xylem and phloem

D. Secondary xylem and phloem

Answer: D

Watch Video Solution

40. Bark formed early in the season is called as

A. Soft bark

B. Hard bark

C. Alburnum

D. Duramen

Answer: A

Watch Video Solution

41. Complementary cells are formed by the activity of

A. Vascular cambium

B. Phellogen

C. Apical meristem

D. Intercalary meristem

Answer: B

Watch Video Solution

42. The youngest layer of secondary phloem in woody dicot stem is located

A. Just outside to epidermis

B. Just outside to vascular cambium

C. Just inside to vascular cambium

D. Between periderm and primary cortex

Answer: B

Watch Video Solution

43. Which of the following is not related to vascular cambium

A. It consists of ray and fusiform initials

B. Most of it's divisions are periclinal

C. Every year only one is formed in concentric

D. Shows seasonal variations in activity

Answer: C

Watch Video Solution

44. Spring wood and Autumn wood are found in

A. Sapwood

B. Phellogen

C. Heartwood

D. both 1 & 3

Answer: D

Watch Video Solution

45. Spring wood and Autumn wood are found in

A. Stem of monocot

B. Root of monocot

C. Leaf of dicot

D. Stem of dicot

Answer: D

Watch Video Solution

Exercise Ii

1. Histogen theory was proposed by

A. Schmidt

B. Nageli

C. Strasburger

D. Hanstein

Answer: D

Watch Video Solution

2. Intercalary meristem results in

(a) secodnary growth

(b) primary growth

(c) apical growth

(d) lateral growth

A. Primary growth

B. Secondary growth

C. Apical growth

D. Cork formation

Answer: A

Watch Video Solution

3. Mechanical tissue abundant in petioles and pedicels is

A. Collenchyma

B. Sclerenchyma

C. Sclereids

D. Parenchyma

Answer: A

Watch Video Solution

4. The tunica corpus theory was proposed by

A. Hanstein

B. Schmidt

C. Bower

D. Campbell

Answer: B

Watch Video Solution

5. Bicollateral vascular bundles can be observed in

A. Aristolochia

B. Helianthus

C. Grass

D. Cucurbita

Answer: D

Watch Video Solution

6. Dermatogen gives rise to

A. Cortex

B. Epidermis

C. Stele

D. Root cap

Answer: B

Watch Video Solution

7. A special meristem present at the root apex is known as

A. Dermatogen

B. Calyptrogen

C. Periblem

D. Plerome

Answer: B

Watch Video Solution

8. Periblem is a part of

A. Cortex

B. Stele

C. Apical meristem

D. Vascular bundle

Answer: C

Watch Video Solution

9. "The ground tissue is undifferentiated in

A. Dicot stem

B. Dicot root

C. Monocot stem

D. Monocot root

Answer: C

Watch Video Solution

10. According to the histogen theory, plerome gives rise to the

(a) Epidermis

(b) Cortex

(c) Pith

(d) Central stele

A. Cortex

B. Stele

C. Epidermis

D. Root cap

Answer: B

Watch Video Solution

11. Apical cell theory was proposed by

A. Hanstein

B. Schmidt

C. Hofmeister

D. Nehemia Grew

Answer: C

Watch Video Solution

12. Calyptrogen gives rise to

A. Root cap

B. Metaxylem

C. Secondary xylem

D. All of these

Answer: A

Watch Video Solution

13. Collenchymatous hypodermis is found in

A. 1) Roots

B. Dicot stem

C. Monocot s tem

D. Monocot leaf

Answer: B

Watch Video Solution

14. The term quiescent centre was called by

A. Nageli

B. Sachs

C. Malpighi

D. Clowes

Answer: D

Watch Video Solution

15. Transfusion tissue is present in the leaves of

A. Leaf let of Cycas

B. Stem of Pinus

C. Leaf of Maize

D. Leaf of Gram

Answer: A

Watch Video Solution

16. Schizogenous cavity is seen in

A. Helianthus

B. Pinus

C. Cucurbita

D. Both 1 and 2

Answer: D

Watch Video Solution

17. Lysigenous cavity is seen in

A. Citrus

B. Eucalyptus

C. Cycas

D. Both 1 and 2

Answer: D

Watch Video Solution

18. Para rubber is obtained from the latex of

A. Euphorbia

B. Nerium

C. Hevea

D. Papaver

Answer: C

Watch Video Solution

19. Sclereids found in the seed coat of pulses are

A. Brachysclereids

B. Macrosclereids

C. Osteosclereids

D. Trichosclereids

Answer: B

Watch Video Solution

20. The function of the lenticel is

A. To protect the plant

B. To absorb water from atmosphere

C. To exchange gases

D. To exude gums

Answer: C

Watch Video Solution

21. In dicotyledonous roots, the lateral roots originate from

A. Epidermis

B. Endodermis

C. Pericycle

D. Medulla

Answer: C

Watch Video Solution

22. Cork of commerce is derived from

A. Phellogen

B. Xylem

C. Phloem

D. Root

Answer: A

Watch Video Solution

23. External protective tissues of plants are

A. Cork and pericycle.

B. Cortex and epidermis

C. Pericycle and cortex

D. Epidermis and cork

Answer: D

Watch Video Solution

24. The type of meristem present in a vascular bundle is

A. Primary

B. Secondary

C. Intercalary

D. Lateral

Answer: A

Watch Video Solution

25. Vascular bundles in which xylem and phloem surround one another is called

A. Conjoint

B. Radial

C. Collateral

D. Concentric

Answer: D

Watch Video Solution

26. Companion cells are usually associated with

A. Fibres

B. Trcheids

C. Vessels

D. Sieve tube

Answer: D

Watch Video Solution

27. Histogens can be observed in

A. Secondary meristem

B. Lateral meristem

C. Apical meristem

D. Intercalary meristem

Answer: C

Watch Video Solution

28. Extrastelar ground tissue system includes

A. Epidermis & cortex

B. Cork & cortex

C. Bark cork & cortex

D. Only cortex

Answer: D

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29. Centripetal development of xylem is present in

A. Dicot root

B. Dicot stem

C. Monocot stem

D. Branches of stem

Answer: A

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30. Protoxylem lacuna are present in the vascular bundles of

A. Monocot stem

B. Dicot stem

C. Monocot root

D. Dicot root

Answer: A

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31. Well developed pith is found in

A. Monocot root and monocot stem

B. Monocot root and dicot root

C. Monocot root and dicot stem

D. Dicot root and dicot stem

Answer: C

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32. Amphicribral vascular bundle is present in the stem of

A. Selaginella

B. Ficus

C. Helianthus

D. Oryza

Answer: A

Watch Video Solution

33. Mesophyll is not differentiated in the leaf of

A. Nerium

B. Cucurbita

C. Helianthus

D. Triticum

Answer: D

Watch Video Solution

34. Well developed pith is found in

A. All roots

B. Dicot root

C. Monocot root

D. All stems

Answer: C

Watch Video Solution

35. In dicot stem the vascular bundles are

A. Conjoint, collateral and open

B. Conjoint, collateral and closed

C. Concentric and closed

D. Concentric and open

Answer: A

Watch Video Solution

36. Centrifugal development of xylem is

A. Monocot root

B. Dicot root

C. Stem

D. None of these

Answer: C

Watch Video Solution

37. Mesarch xylem is present in

A. Ferns

B. Dicots

C. Monocots

D. Bryophyles

Answer: A

Watch Video Solution

38. A superior quality commercial cork is obtained from

A. Eucalyptus

B. Mangifera

C. Quercus (Oak)

D. Tamarindus

Answer: C

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39. The bark of which one of the following plants is used as a condiment in food stuffs?

A. Cinnamomum zeylanicum

B. Tamarindus indica

C. Psidium guajava

D. Azadirchta indica

Answer: A

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40. Type of bark in Psidium is

A. Ring bark

B. Scaly bark

C. Bottle cork

D. Spicy bark

Answer: B

Watch Video Solution

41. Bulliform cells in a grass leaf are useful for

A. Transpiration

B. Conduction

C. Rolling and unrolling of leaves

D. Growth of leaves

Answer: C

Watch Video Solution

42. Amphivasal vascular bundles are found in

A. Cycas and Dryopteris

B. Dracaena and Yucca

C. Helianthus and Cucurbita

D. Maize and Wheat

Answer: B

Watch Video Solution

43. Fibro vascular bundles are present in

A. Monocot stem

B. Dicot stem

C. Monocot root

D. Dicot root

Answer: A

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44. In which of the vascular bundles phloem is surrounded by xylem

A. Collateral

B. Amphivasal

C. Amphicribral

D. Radial

Answer: B

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45. In which of the vascular bundles xylem is surrounded by phloem

A. Collateral

B. Leptocentric

C. Hadrocentric

D. Radial

Answer: C

Watch Video Solution

46. In dicot stem

A. The xylemis exarch

B. The xylem and phloem occur in separate bundles

C. Vascular bundles are arranged in a ring and have cambium

D. Vascular bundles are scattered and lack cambium

Answer: C

Watch Video Solution

47. Monocot root differs from dicot root in having

A. Open vascular bundles

B. Scattered vascular bundles

C. Well developed pith

D. Radially arranged vascular bundles

Answer: C

Watch Video Solution

48. Age of a tree can be derived by

A. Measuring the height of the plant

B. Counting the number of leaves

C. Measuring the girth of the trunk

D. Counting the number of annual rings

Answer: D

Watch Video Solution

49. Tyloses occur in

A. Secondary xylem

B. Secondary phloem

C. Callus tissue

D. Cork cells

Answer: A

Watch Video Solution

50. Chemical present in the walls of cork cell is

A. Lignin

B. Chitin

C. Cutin

D. Suberin

Answer: D

Watch Video Solution

51. In which of the following the vasuclar cambium is completely secondary meristem?

A. Dicot stem

B. Dicot root

C. Monocot stem

D. Monocot root

Answer: B

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52. Fundamental tissue in plants is

A. Sclerenchyma

B. Collenchyma

C. Parenchyma

D. Xylem

Answer: C

Watch Video Solution

53. Bone like sclereids are

A. Trichosclereids

B. Astrosclereids

C. Osteosclereids

D. Macrosclereids

Answer: C

Watch Video Solution

54. The term meristem was conined by

(a) C. negeli

(b) Mettenius

(c) Schuepp

(d) Schmidt

A. Nageli

B. Hanstein

C. Hofmeister

D. Schmidt

Answer: A

Watch Video Solution

55. Atactostele is present in

A. Dicot stem

B. Monocot stem

C. Dicot root

D. Monocot root

Answer: B

Watch Video Solution

56. Kranz anatomy is found in the leaves of

A. C_3 plants

B. C_4 plants

C. CAM plants

D. C_2 plants

Answer: B

Watch Video Solution

57. Reticulate and scalariform thickenings are found in one of the following

A. Sieve tubes

B. Metaxylem vessels

C. Protoxylem vessels

D. Companion cells

Answer: C

Watch Video Solution

58. Silica crystals are present in the leaf epidermis of

A. Grass

B. Hibiscus

C. Tridax

D. Cucurbita

Answer: A

Watch Video Solution

59. Bicollateral vascular bundles are found in

A. Cucurbitaceae

B. Solanaceae

C. Asteraceae

D. Both 1 and 2

Answer: D

Watch Video Solution

60. Xylem vessels are few and are arranged in the form of Y in

A. Dicot stem

B. Monocot stem

C. Monocot root

D. Dicot root

Answer: B

Watch Video Solution

61. Star shaped sclereids are called

A. Trichosclereids

B. Astrosclereids

C. Macrosclereids

D. Osteosclereids

Answer: B

Watch Video Solution

62. The layer of thin walled cells which separates the wood from phloem in dicot plants is called

A. Endodermis

B. Pericycle

C. Vascular cambium

D. Cork cambium

Answer: C

Watch Video Solution

63. In bicollateral vascular bundle

A. Xylem is sandwitched by phloem

B. Phloem is sandwitched by xylem

C. Cambium is absent

D. The transverse splitting of one bundle into two bundles can be identified

Answer: A

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64. Which of the following statement is correct?

A. In a t.s. of a root protoxylem is towards the centre

B. In root metaxylem is towards the periphery

C. In root protoxylem is towards the periphery

D. Lateral roots arise from endodermis

Answer: C

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65. Margo is a part of

A. Simple pit

B. Stomata

C. Bordered pit

D. Lenticel

Answer: C

Watch Video Solution

66. The latest formed secondary xylem is located

A. Immediately external to vascular cambium

B. Immediately beneath the vascular cambium

C. Immediately internal to phellogen

D. Between secondary phloem and cork cambium

Answer: B

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67. The sap wood occurs between

A. Cambium and Secondary phloem

B. Cambium and Heart wood

C. Heart wood and Pith

D. Phloem and Cortex

Answer: B

Watch Video Solution

68. Medullary rays are made up of

A. Parenchyma

B. Collenchyma

C. Sclerenchyma

D. Fibres

Answer: A

Watch Video Solution

69. Which of the following is absent in the phloem of monocots

A. Sieve tubes

B. Parenchyma

C. Companion cells

D. Fibres

Answer: B

Watch Video Solution

70. Quiescent centre is present in

A. Root tip

B. Stem tip

C. Flower

D. Leaf

Answer: A

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71. Quiescent zone is the zone of

A. Less mitotic activity in the root apex

B. Less mitotic activity in the shoot apex

C. Maximum mitotic activity in the root apex

D. Maximum mitotic activity in the shoot apex

Answer: A

Watch Video Solution

72. Angular collenchyma is found in

A. Solanum

B. Cucurbita

C. Lactuca

D. 1 and 2

Answer: D

Watch Video Solution

73. Sieve tubes are characteristed by

A. Lignified walls

B. Perforated and longitudinal plates

C. Perforated and oblique septa

D. Nucleus at maturity

Answer: C

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74. The organizatin of shoot apex into tunica and corpus is determined largely on the basis of

(a) Regions of meristematic activity

(b) Planes of cell division

(c) Rate of shoot tip growth

(d) Rate of cell division

A. Regions of meristematic activity

B. planes of cell division

C. Rate of shoot tip growth

D. Rate of cell division

Answer: B

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75. A meristem in which cells divide in all planes is known as

A. Plate merisem

B. Rib meristem

C. Angle meristem

D. Mass meristem

Answer: D

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76. Annual rings are distinct in plants growing in

A. Arctic regions

B. Temperate regions

C. Tropical region

D. Grasslands

Answer: B

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77. If there is more than one tunica layer in a stem apex, which among the following is most likely to happen?

A. The outer layer will develop into epidermal cells

B. The innermost layer will develop into epidermal cells

C. All the layers will develop into cortical cells

D. All the layers will develop into epidermal cells

Answer: A

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78. An example for plate meristem is

A. Protoderm

B. Periblem

C. Embryo

D. Endosperm

Answer: A

Watch Video Solution

79. The sieve pores of old sieve tubes are blocked by a carbohydrate known as

A. Arabinose

B. Raffinose

C. Callose

D. Callus

Answer: C

Watch Video Solution

80. Fusiform initials and ray initials are component of :

A. Secondary xylem and Secondary phloem

B. Vascular rays

C. Phloem parenchyma

D. Ray parenchyma

Answer: A

Watch Video Solution

81. The vascular tissue in which annual rings vessels and fibers are present should be a

A. Protoxylem

B. Metaxylem

C. Primary xylem

D. Secondary xylem

Answer: D

Watch Video Solution

82. In autumn, the callose pad appear on

A. Tracheids

B. Vessels

C. Sieve tubes

D. Companion cells

Answer: C

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83. Lenticel and its complementary cells are developed through the activity of

A. Phellogen

B. Stelar cambium

C. Dermatogen

D. Intercalary meristem

Answer: A

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84. Medullary rays are mainly

A. Dicot stem

B. Monocot stem

C. Roots

D. Both 2 and 3

Answer: D

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85. When a tree grows older which of the following increases rapidly?

A. Heart wood

B. Sap wood

C. Pith

D. Cortex

Answer: A

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86. The most common type of collenchyma is

A. Angular collenchyma

B. Lamellar collenchyma

C. Lacunar collenchyma

D. All of these

Answer: A

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87. Casparian bands are found in

A. Epidermis

B. General cortex

C. Endodermis

D. Pericycle

Answer: C

Watch Video Solution

88. The term meristem, xylem and phloem were coined by

A. Hofmeister

B. Douliot

C. Nageli

D. Grew

Answer: C

Watch Video Solution

89. Passage cells are found in

A. Exodennis

B. Epidermis

C. Pericyle

D. Endodermis

Answer: D

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90. Bast fibres derived from

A. Secondary xylem

B. Cork cambium

C. Pericycle

D. Secondnary phloem

Answer: D

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91. Most of the metabolism of a plant is carried out by

A. Parenchyma

B. Collenchyma

C. Sclerenchyma

D. Epidermis

Answer: A

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92. Epithem consists of

A. Compactly arranged parenchyma cells

B. Loosely arranged parenchyma cells

C. Terminal tracheary elements

D. Air cavity

Answer: B

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93. Vesselless angiosperms is/are

A. Drimys

B. Trochodendron

C. Tetracentron

D. All of these

Answer: D

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94. The formation of distinct annual rings in stem mainly depends upon

A. Formation of cork cambia

B. Contrasting seasonal variations

C. Uniform climatic conditions

D. Formation of unequal phloem and xylem

Answer: B

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95. Sheathing leaf bases of grasses is mainly due to activity of

A. Apical meristem

B. Lateral meristem

C. Intercalary

D. 1 and 3

Answer: C

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96. Cortex and pith are not distinguished in -

A. Monocot stem

B. Monocot root

C. Dicot stem

D. Dicot root

Answer: A

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97. What is not true about sclereids ?

A. These are selerenchyma cells with thickened lignified walls

B. These are commonly found in the shells of nuts and in the pulp of pear

C. These are elongated and flexible with tapered ends

D. These are called stone cells

Answer: C

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98. Bulliform cells are

A. Sclerenchymatous cells

B. Parenchymatous cells

C. Large sized collenchyma cells

D. Water filled and highly vacuolated epidermal cells

Answer: D

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99. Tyloses are

A. Compound sieve plates

B. Laticiferous channels

C. Tracheal plugs which block the lumen of vessels

D. Callose plugs

Answer: C

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100. Water exudation through hydathodes is

A. Guttation

B. Transpiration

C. Excretion

D. Hydrolysis

Answer: A

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101. Root cap regenerates or is produced from

A. Calyptrogen

B. Plerome

C. Periblem

D. Dermatogen

Answer: A

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102. Three tissue systems were first clasified by

A. Schmidt

B. Hanstein

C. Sachs

D. Nageli

Answer: C

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103. Grafting is not possible in monocots because of

A. Lack of cambium

B. Presence of scattered vascular bundles

C. Parallel venation

D. Herbaceous nature

Answer: B

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104. Collenchyma differs from sclerenchyma in

A. Retaining protoplast at maturity

B. Having thick walls

C. Having a wide lumen

D. Being meristematic

Answer: A

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105. Which dead tissue contributes the most to mechanical strength of plant?

A. Sclerenchyma

B. Cork

C. Sclereids

D. Collenchyma

Answer: A

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106. In which of the following phloem occurs in two patches within the vascular bundle?

A. radial

B. Bicollateral

C. collateral

D. closed vascular bundle

Answer: C

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107. Mesarch xylem is

A. Protoxylem is situated towards the periphery

B. Protoxylem is situated towards the centre

C. Protoxylem is surrounded by metaxylem

D. Metaxylem is surrounded by protoxylem

Answer: B

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108. The oldest layer of secondary phloem is

A. Outside the cork cambium

B. Inside the vascular cambium

C. Inside the primary phloem

D. Immediately out side the vascular cambium

Answer: C

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109. Sieve cells occur in

A. Angiosperms only

B. Gymnosperms only

C. Pteridophytes only

D. Pteridophytes and gymnosperms

Answer: D

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110. A vascular bundle without cambium in between xylem and phloem is called

A. Radial

B. Closed

C. Open

D. Bicollateral

Answer: B

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111. Interfascicular cambium develops from the cells of

A. Medullary rays

B. Xylem parenchyma

C. Endodermis

D. Pericycle

Answer: A

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112. Lenticels are involved in

A. Transpiration

B. Gaseous exchange

C. Food transport

D. Photosynthesis

Answer: B

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113. Age of a tree can be estimated by :

A. its height and girth

B. biomass

C. number of annual rings

D. diameter of its heartwood

Answer: C

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114. Companion cells are closely associated with

A. Trichomes

B. Guard cells

C. Sieve tube elements

D. Vessel elements

Answer: C

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115. The annular and spirally thickened conducting elements generally develop in the protoxylem when the root or stem is

A. Differentiating

B. Maturing

C. Elongating

D. Widening

Answer: B

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116. In barley stem vascular bundles are

A. Closed and radial

B. Open and scattered

C. Closed and scattered

D. Open and in a ring

Answer: C

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117. Reduction in vascular tissue, mechanical tissue and cuticle is characteristic of

A. Hydrophytes

B. Xerophytes

C. Mesophytes

D. Epiphytes

Answer: A

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118. Fundamental tissue system of primary stem and root consists of

A. Stele, Cortex

B. Cortex, Pith only

C. Cortex, Mesophyll, Pericycle, and Pith

D. Cortex, Pericycle, Pith, Medullary rays / conjuctive tissue

Answer: D

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119. Structure and function of a tissue is mainly dependent on

A. Its cytoplasmic contents

B. Its location in the plant body

C. Its distribution in the plant kingdom

D. Its origin

Answer: B

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120. Choose the incorrect one pair from the following .

A. Ground tissue may consists of simple tissues that lies in between epidermis and vascular bundles.

B. In leaves the ground tissue consists of thin walled chloroplast containing cells called mesophyll.

C. The vascular system consists of complex tissue the phloem and xylem

D. Secondary growth/secondary tissues are formed in monocots due to the presence of cambium

Answer: D

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121. Match the following

List - I	List - II
1) Epidermis	I) Bean shaped cells
2) Cuticle	II) Stomatal aperture, guard cells and subsidiary c
3) Stomatal apparatus	III) Thick waxy layer
4) Guard cells	IV) Outermost layer

A. 1) $\begin{matrix} A & B & C & D \\ II & III & IV & I \end{matrix}$

B. 2) $\begin{matrix} A & B & C & D \\ IV & III & II & I \end{matrix}$

C. 3) $\begin{matrix} A & B & C & D \\ I & II & III & IV \end{matrix}$

D. 4) $\begin{matrix} A & B & C & D \\ II & I & III & IV \end{matrix}$

Answer: B

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122. Find the mis-match

A. Conjoint vascular bundles -phloem on different radii

B. Closed Vascular Bundles-Cambium is absent

C. Xylem and Radial Vascular Bundles-Xylem and Phloem on different radii

D. Dicotyledonous stem - Cambium is present

Answer: A

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123. In a dicot root

A. 1)The vascular bundles are scattered and lack cambium

B. 2)The vascular bundles are usually arranged in a ring and have cambium

C. 3)Xylem and Phloem show radial arrangement

D. 4)Xylem is always endarch

Answer: C

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124. Trichomes of shoot system

A. Usually multicellular

B. May be branched or unbranched

C. May be soft or sticky

D. All are related

Answer: D

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125. Casparian bands are found in

A. Endodermis

B. Epidermis

C. Pericycle

D. Phloem

Answer: A

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126. Lateral roots originate from

A. Endodermis

B. Cortex

C. Pericycle

D. Phloem

Answer: C

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127. After two years of secondary growth the cortex in a dicot root

A. Remains intact

B. Completely sloughed off

C. Is largely lost

D. is converted into cork

Answer: A

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128. Which of the following meristem is responsible for growth in circumference of stem or root

A. Xylem

B. Phloem

C. Cortex

D. Cambium

Answer: D

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129. In leaves, the ground tissue comprises of

A. Mesophyll, Vascular bundles

B. Epiderm is and vascular bundles

C. Only mesophyll

D. Mesophyll, xylem parenchyma, phloem parenchyma

Answer: C

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130. Secondary growth in Dicot root occurs with the help of

A. Lateral meristem, primary meristem, secondary meristem

B. Lateral meristem, only secondary meristem

C. Intercalary meristem, only primary meristem

D. Apical, lateral and intercalary meristems

Answer: B

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131. In dicot root, during secondary growth, vascular cambium is formed from

A. only pericycle

B. pericycle present in contact with protoxylem and conjuctive tissue present below the phloem

C. complete ring of pericycle and conjunctive tissue present below the xylem

D. complete ring of pricycle and total conjunctive tissue

Answer: B

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132. First formed vascular cambial ring of dicot root is

A. Circular, continuous

B. Circular, discontinuous

C. Wavy, non-functional

D. Wavy, continuous

Answer: D

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133. Match the following

List - I	List - II
A) Trichomes	I) Cambium
B) Root hairs	II) Leaves
C) Mesophyll	III) Unicellular
D) Dicotyledonous	IV) Epidermal hairs stem

A. $\begin{matrix} A & B & C & D \\ IV & III & II & I \end{matrix}$

B. $\begin{matrix} A & B & C & D \\ I & II & III & IV \end{matrix}$

C. $\begin{matrix} A & B & C & D \\ III & IV & II & I \end{matrix}$

D. $\begin{matrix} A & B & C & D \\ III & IV & I & II \end{matrix}$

Answer: A

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134. Find out the correct reason for non-existence of sharp annual rings in Secondary dicot root as found in secondary wood of dicot stem.

A. Lack of periclinal divisions in vascular cambium

B. Production of more secondary xylem to inside and less secondary phloem outside

C. Relatively less difference in the climate of the soil during different seasons.

D. Unexposure of root to proper wet conditions.

Answer: C

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135. The nature of guard cells cell wall away from and towards the stomatal pore is respectively

A. Thick, Thin

B. Thin, Thick

C. Thin, thin

D. Thick, thick

Answer: B

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136. Anomalous secondary growth in monocots is seen in

A. Dracaena

B. Aloe

C. Yucca

D. All of the above

Answer: D

Watch Video Solution

137. One can differentiate the nature of guard cells between dicots and grasses by

A. Its shape

B. Its secretion of chemicals

C. Its enzymatic activity

D. None of these

Answer: A

Watch Video Solution

138. Cork formed during secondary growth in dicot root, protects the root interior from

A. Pathogens

B. Temperature variations

C. Water

D. Both (1) and (2)

Answer: D

Watch Video Solution

139. The functional aspect of trichome is

A. preventing water loss

B. secretory in nature

C. Protection

D. All

Answer: D

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140. Identify the set of structures reported in Epidermal tissue system

A. Epidermal cells, stomata, trichomes and hairs

B. Epidermal cells, stomata, vascular tissues

C. Stomata, Trichomes, Stelar tissues

D. Epidermal cells, stomata, trichomes, cortical cells

Answer: A

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141. The following type of tissue is usually absent in roots

A. Parenchyma

B. Meristem

C. Collenchyma

D. Sclerenchyma

Answer: C

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142. Tyloses are formed in

A. Cortex

B. Secondary xylem

C. Pericycle

D. Tracheary elements

Answer: D

Watch Video Solution

143. During dedifferentiation

Parenchyma is converted into sclerenchyma

Parenchyma forms meristem

Derivatives of primary meristem form primary tissues

Sclerenchyma becomes totipotent

A. Parenchyma is converted into sclerenchyma

B. Parenchyma forms meristem

C. Derivatives of primary meristem form primary tissues

D. Sclerenchyma becomes totipotent

Answer: B

Watch Video Solution

144. Sclerenchyma is mechanical tissue because it has

A. Secondary wall

B. Thick lignified cell wall

C. Pits

D. has bordered pits

Answer: B

Watch Video Solution

145. Multilayered sclerenchymatous pericycle is seen in

A. Dicot stem

B. Monocot stem

C. Dicot leaf

D. Dicot root

Answer: A

Watch Video Solution

146. Protoderm gives rise

A. Endodermis

B. Epidermis

C. Periderm

D. Cortex

Answer: B

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147. Quiscent center is a part of

A. Dermal tissue system

B. Ground tissue system

C. Lateral meristem

D. Apical meristem of root

Answer: D

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148. This is an example for primary meristem involved in secondary growth

A. Apical meristem

B. Cork cambium

C. Fascicular cambium of dicot stem

D. Intercalary meristem

Answer: C

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149. During secondary growth in a dicot root, cork cambium is formed by the activity of

A. cortex

B. pericycle

C. Endodermis

D. hypodermis

Answer: A

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150. Tissue that holds more water in its cell wall is

A. Collenchyma

B. Sclerenchyma

C. Parenchyma

D. Meristem

Answer: A

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151. Essential oils are abundantly present in

A. Primary xylem

B. Early wood

C. Heart wood

D. Sap wood

Answer: C

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152. The parts removed by herbivorous animals are regenerated by

A. Apical meristems

B. Lateral meristems

C. Intercalary meristems

D. All

Answer: C

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153. In dicot stem, the pericycle is

A. Multilayered

B. Single layered

C. Two layered

D. Absent

Answer: B

Watch Video Solution

154. Enucleated living cells are seen in the cells of

A. Xylem fibers

B. Tracheids

C. vessels

D. Sieve cells

Answer: D

Watch Video Solution

155. Pulp of some fleshy fruits (apple) is rich in

A. Collenchyma

B. Xylem

C. Fibers

D. Sclereids

Answer: D

Watch Video Solution

156. The shape of guard cells of Poaceae members is

A. Banana shape

B. Bean shape

C. Fusiform

D. Dumb-bell shape

Answer: D

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157. Vascular cambium is absent

A. Dicot leaf

B. Monocot stem

C. Monocot root

D. All

Answer: D

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158. Collenchyma is present in

A. Dermal tissue system

B. Stelar ground tissue system

C. Extra-stelar ground tissue system

D. Vascular tissue system

Answer: C

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159. Meristematic cells do not show

A. A large conspicuous nucleus

B. Ergastic substances like tannins, Resins etc.

C. Active metabolism

D. Proplastids

Answer: B

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160. Interfascicular cambium and cork cambium are

A. Primary meristems

B. Secondary meristems

C. Apical meristems

D. Seasonal meristems

Answer: B

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161. How many shoot apical meristems likely to be present in a twig of a plant possessing 4 branches and 26 leaves

A. 26

B. 1

C. 5

D. 30

Answer: C

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162. Linear growth in the stem of grasses is caused by

A. Intercalary meristems

B. Apical meristems

C. Fascicular cambium

D. both 1 and 2

Answer: A

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163. Water storage parenchyma is found in

A. Hydrophytes

B. Mesophytes

C. Halophytes

D. Succulents

Answer: D

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164. Continuous and discontinuous collenchymatic ring is found in dicots like

A. Cucurbita and Helianthus

B. Helianthus and Cucurbita

C. Zea mays and Helianthus

D. Cucurbita and Zea mays

Answer: B

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165. Collenchyma with irregular arrangement of cells with inter cellular spaces

A. Lamellar collenchyma only

B. Angular collenchyma only

C. Lacunar collenchyma only

D. Both angular and lacunar collenchyma

Answer: C

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166. Both tricho and filiform sclereids are found in

A. Leaves of Hakea

B. Leaves of Olea

C. Petioles of Nymphaea

D. Aerial roots of Monstera

Answer: B

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167. The main elements of conduction of water and mineral salts in Pteridophytes pue Gymnosperms are

A. Tracheae

B. Sieve cell

C. Tracheids

D. Sieve tube

Answer: C

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168. Primary xylem is developed from

A. Cambium

B. Interfascicular cambium

C. Procambium

D. Cork cambium

Answer: B

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169. Enucleated living cells found in the angiospermic plant body are

A. Companion cells

B. Mature sieve tube cell

C. Tracheae

D. Tracheids

Answer: B

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170. Insectivorous plants generally contain

A. Nectary glands

B. Osmophores

C. Digestive glands

D. Hydathodes

Answer: C

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171. A layer of cells that surrounds the schizogenous cavity is called

A. Endothecium

B. Epithelium

C. Epithem

D. Exothecium

Answer: B

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172. Scientific name of Indian rubber tree is

A. Calotropis

B. Catharanthus

C. Ficus elastica

D. Hevea brasiliensis

Answer: C

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173. Identify the incorrect statement regarding tracheary elements of xylem

A. Protoplasts are absent

B. Elongated, cells with lignified secondary walls

C. All groups of plants (vascular) contain both the tracheary elements

D. Chiefly concerned with conduction of water

Answer: C

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174. Tyloses are observed in the lumen of

A. Thylakoids

B. Sieve tubes

C. Sap wood

D. Heart wood

Answer: D

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175. The hypodermal cells in the seed coat of legumes show

A. Very narrow lumen

B. Deposition of lignin in stratified layers in cell walls

C. Resemblance with parenchyma cell in having primary pit fields

D. 1 & 2

Answer: B

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176. A gymnosperm having vessels is

A. Selaginella

B. Equisetum

C. Gnetum

D. Drimys

Answer: C

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177. Which has living cells

A. Xylem

B. Phloem

C. Both

D. none of these

Answer: C

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178. Atactostele is found in

A. Dicot Stem

B. Monocot Stem

C. Monocot Root

D. Dicot Root

Answer: A

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179. Identify the incorrect statement regarding endodermis of roots

A. It is the innermost part of cortex

B. It prevents the entry of air from soil into stele

C. It is single layered, barrel shaped cells with casparian bands

D. It helps in leakage of water from stele into cortex

Answer: D

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180. Endodermis with many passage cells are seen in cross section of

A. Castanea root

B. Helianthus root

C. Ricinus root

D. Zea root

Answer: D

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181. Albuminous cells occur in

A. Xylem

B. Parenchyma

C. Phloem

D. Sclerenchyma

Answer: C

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182. The shape of arrangement of xylem vessels in monocot stem

A. Y-shaped

B. X-shaped

C. Long, tubular

D. S-shaped

Answer: A

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183. Chlorophyllous cells fewer in number,unique is shape with inner walls thicker are

A. Subsidiary cells

B. Guard cells

C. Passage cells

D. Bulliform cells

Answer: B

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184. Anomalous secondary growth found in dicot root of

A. Raphanus

B. Dacus

C. Beta

D. All

Answer: D

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185. Leaves are devoid of

A. Endodermis

B. Pericycle

C. Epdermis

D. 1 & 2

Answer: D

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186. Longest plant cell is

A. Flax fibers of Linum

B. Fiber of Gossypium

C. Acetabularia

D. Ramie fibers of Boehmeria

Answer: D

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187. Father of plant anatomy

A. Robert hooke

B. Robert brown

C. N.grew

D. Stephen hales

Answer: C

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188. A nuclear stain haematoxylin is extracted form the _____ of Haematoxylum

A. Sapwood

B. Bark

C. Periderm

D. Heart wood

Answer: D

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189. Vessels are found in

A. Most of the angiosperm and few gymnosperms

B. Most of the gymnosperms and few angiosperm

C. All pteridophyta

D. All gymnosperms

Answer: D

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190. Quiescent centre possesses

A. Activity dividing cells

B. Meristematic cells

C. Reserve cells

D. Storage cells

Answer: C

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191. Choose the mismatch

A. Libriform fiber Simple pits in lignified walls

B. Companion cell-sister cell of albuminous cell

C. Sieve tube element -Unspecialized sieve areas on lateral walls

D. Tyloses- Obstruct the growth of pathogenic fungi

Answer: C

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192. Ray initials are found in

A. Cork cambium

B. Vascular cambium

C. Lateral meristem on the whole

D. Ground tissue

Answer: B

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193. Based on function meristems are classified by

A. Strasburger

B. Nageli

C. Schmidt

D. Haberlandt

Answer: D

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194. Xylem and phloem of primary plant body are formed from

A. Dermatogen

B. Protoderm

C. Promeristem

D. Procambium

Answer: D

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195. Meristem which produces vascular bundles is

A. Procambium

B. Lateral meristem

C. Secondary meristem

D. Mass mieristem

Answer: A

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196. Which tissue is commercially exploited to obtain hemp and jute

A. Stone cells

B. Sclerotic cells

C. Sclerenchyma fibres

D. wood parenchyma

Answer: C

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197. Papain (a proteolytic enzyme) is found in the latex of

A. Carica

B. Ficus

C. Nerium

D. Euphorbia

Answer: A

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198. Hydathode has

A. Subsidiary cells

B. Accessory cell

C. Complementary cells

D. Epithem

Answer: D

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199. Articulated latex vessels occur in

A. Euphorbia hirta

B. Nerium

C. Carica papaya

D. Vinca rosea

Answer: C

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200. Latex is produced by the plants belonging to

A. Euphorbiaceae

B. Apocyanaceae and Caricaceae

C. Asclepiadaceae and Convolvulaceae

D. All of the above

Answer: D

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201. Laticifers are usually associated with

A. Xylem

B. Phloem

C. Cortex

D. Medulla

Answer: B

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202. Heterotrophic and absorptive mode of nutrition is found in

A. Algae

B. Fungi

C. Bryophytes

D. None

Answer: A

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203. Water glands are also called

A. Hydathodes

B. Pitchers

C. Bulliform cells

D. Laticiferous glands

Answer: A

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204. Multilayered epidermis occurs in leaves of

A. Ficus

B. Nerium

C. Peperomia

D. All

Answer: D

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205. Stomata develops from

A. Dermal tissue

B. Ground tissue

C. Hypodermal tissue

D. Acessory tissue

Answer: A

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206. Guard cells differ from epidermal cells in having

A. Specific shape

B. Chloroplast

C. More thickened inner wall

D. All of the above

Answer: D

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207. Concentric vascular bundles are

A. Always closed

B. Occasionally closed

C. Maize stem bundles

D. Found in root

Answer: A

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208. Stelar tissue originate from

A. Dematogen

B. Plerome

C. Periblem

D. Tunica layer

Answer: B

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209. Structurally, the amphicribal vascular bundles closely resemble to

A. Protostele

B. Siphonostele

C. Solanostele

D. Dictyostele

Answer: A

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210. Differentiation in phloem is

A. Sometimes centripetal

B. Sometimes centrifugal

C. Always centripetal

D. Always centrifugal

Answer: D

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211. Hydrostereom or transfusion tissue is found in

A. Gymnosperm leaves or leaflets

B. Dicot plants leaves

C. Monocot plants only

D. Angisoperms on the whole

Answer: A

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212. Amphicribal vascular bundles are also called

A. Leptocentric

B. Hadrocentric

C. Amphivasal

D. Bicollateral

Answer: B

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213. Pith is hollow in

A. 1)Cucurbita stem

B. 2)Oryza stem

C. 3)Wheat stem

D. 4)All of these

Answer: D

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214. Cystoliths are chemically composed of

A. Calcium oxalate

B. Calcium carbonates

C. Calcium bicarbonates

D. Potassium bicarbonates

Answer: B

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Exercise Iii Previous Aipmt Neet Questions

1. Cortex is the region found between

A. endodermis and pith

B. endodermis and vascular bundle

C. epidermis and stele

D. pericycle and endodermis

Answer: C

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2. The ballone-shaped structures called tyloses

A. are extensions of xylem parenchyma cells into vessels

B. are linked to the ascent of sap through xylem vessels

C. originate in the lumen of vessels

D. characterize the sapwood

Answer: A

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3. Specialised epidermal cells surrounding the guard cell are called

A. Complementary cells

B. Subsidiary cells

C. Bulliform cells

D. Lenticels

Answer: B

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4. A major characteristic of the monocot root is the presence of :

A. vasculature without cambium

B. cambium sandwiched between phloem and xylem along the radius

C. open vascular bundles

D. scattered vascular bundles

Answer: A

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5. Vascular bundles in monocotyledons are considered closed because

A. there are no vessels with perforations

B. xylem is surrounded all around by phloem

C. a bundle sheath surrouds each bundle

D. cambium is absent

Answer: D

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6. Read the different components from (A) to (D) in the list given below and tell the correct order of the components with reference to their arrangement from outer side to inner side in a woody dicot stem

(A) Secondary cortex , (B) Wood

(C)Secondary phloem , (D) Phellem

A. iv, i, iii, ii

B. iv, iii, i, ii

C. i, ii, iv, iii

D. iii, iv, ii, I

Answer: A

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7. Tracheids differ from other tracheary elements in :

A. having casparian strips

B. being imperforate

C. lacking nucleus

D. being lignified

Answer: B

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8. Lenticels are involved in

A. food tansport

B. photosynthesis

C. transpiration

D. gaseous exchange

Answer: D

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9. Interfascicular cambium develops from the cells of

A. endodermis

B. pericycle

C. medullary rays

D. xylem parenchyma

Answer: C

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10. Companion cells are closely associated with

A. sieve elements

B. vessel elements

C. trichomes

D. guard cells

Answer: A

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11. Closed vascular bundles lack

A. ground tissue

B. conjuncitive tissue

C. cambium

D. pith

Answer: C

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12. Water contaning cavities in vascular bundles are found in

A. Sunflower

B. Maize

C. Cycas

D. Pinus

Answer: B

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13. As compared to a dicot, root, a monocot root has

A. more abundant secondary xylem

B. many xylem bundles

C. inconspicuous annual rings

D. relatively thicker periderm

Answer: B

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14. Ground tissues includes

A. all tissues external to endodermis

B. all tissues except epidermis and vascular bundles

C. epidermis and cortex

D. all tissues internal to endodermis

Answer: B

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15. The cork cambium , cork and secondary cortex are collectively called

A. phelloderm

B. phellogen

C. periderm

D. phellem

Answer: C

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16. Function of companion cells is

A. provide energy to sieve elements for active transport

B. provide water to phloem

C. load sucrose into sieve elements by passive transport

D. load sucrose into sieve elements by acive transport.

Answer: D

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17. Some vascular bundles are dsecribed as open because theses

A. are surrounded by pericycle but no endodermis

B. are capable of producing secondary xylem and phloem

C. possess conjunctive tissue between xylem and phloem

D. are not surrounded by pericycle.

Answer: B

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18. Anatomically fairly old dicotyledonous root is distinguished formt eh dicotyleodnous stem by

A. absence of secondary phloem

B. presence of cortex

C. position of protoxylem

D. absence of secondary xylem

Answer: C

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19. The annular and spirally thickened conducting elements generally develop in the protoxylem when the root or stem is

A. elongating

B. widening

C. differentiating

D. maturing

Answer: D

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20. Palisade parenchyma is absent in leaves of:

A. Mustard

B. Soyabean

C. Gram

D. Sorghum

Answer: D

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21. In barley stem, vascular bundles are

A. closed and scattered

B. open and in a ring

C. closed and radial

D. open and scattered

Answer: A

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22. The length of different internodes in a culm of sugarcane is variable because of

A. size of leaf lamina at the node below each internode

B. intercalary meristem

C. shoot apical meristem

D. position of axillary buds flowering plants develop

Answer: B

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23. Vascular tissues develop from

A. 1)periblem

B. 2)dermatogens

C. 3)phellogen

D. 4)plerome

Answer: D

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24. Passage cells are walled cells found in

A. phloem elements that serve as entry points for substance for trasport to other

B. testa of seeds to enable emergence of growing embryonic axis during seed germination

C. Central region of style through which the pollen tube grows towards the ovary

D. endodermis of roots facilitating rapid transport of water from cortex to pericycle.

Answer: D

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