BIOLOGY

BOOKS - MODERN PUBLICATION

ANATOMY OF FLOWERING PLANTS

Exercise

1. Write the functions of parenchyma.

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2. What is the function of collenchyma.

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3. What is the function of sclerenchyma?

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4. Give examples of secondary meristem.

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5. Describe briefly the tunica-corpus theory.

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6. Define intercalary meristems. How do they differ from other meristems?

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7. What is wood ? What are the components of wood? Name two types of wood.

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8. What you know about glandular tissues?

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9. What is structure of stomata?

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10. Differentiate between protoxylem and metaxylem.

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11. What is an annual ring ?

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12. What is meant by secondary growth? Which meristems are responsible for the

secondary growth?

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13. Differentiate between stem hair and root hair.

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14. Fill in the blanks:

.....cavity is present in vascular bundle of monocot stem.

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15. What are the characteristic of Kranz anatomy?

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16. How an annual ring is formed?

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17. Define the terms alburnum

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18. Define the terms duramen.

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19. What are sieve elements? Why is the septum between two sieve tube elements called sieve plate?

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20. Draw illustrations to bring out the anatomical difference between: Monocot root and Dicot root

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21. Draw illustrations to bring out the anatomical difference between: Monocot stem and Dicot stem

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22. Classify meristem on the basis of origin.

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23. Which are complex permanent tissues. Explain with the help of diagrams.

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24. Describe the internal structure of a dorsiventral leaf with the help of labelled diagrams.

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25. Explain the process of secondary growth in the stems of woody angiosperms with the help of schematic diagrams. What is its significance?

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26. Describe the anatomy of monocot stem.

27. Differentiate between sapwood and heartwood.

28. Write 'True' or 'False'.

Aerenchyma is a specialised parenchyma occuring in aquatic plants.

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29. Write 'True' or 'False'.

Sieve cells are most commonly found in the lower vascular plants.

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30. Write 'True' or 'False'.

A vascular bundle laking cambium is called closed bundle.

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31. Write 'True' or 'False'.

In Aristolochia anomalous secondary growth is present.

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32. Write 'True' or 'False'.

If a sign was nailed in the trunk of the tree six feet above the ground eight years back, the height of this sign will remain at same point, although the tree grows every year by 40 cms.

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33. Write 'True' or 'False'.

In quiescent centre cells are active.

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34. True or False

Root cap is formed from calyptrogen in monocots.

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35. True or False

Intercalary meristem is present at tip of branches.

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36. True or False

In stem branches arise endogenously.

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37. True or False

Shoot apex changes its activity in reproductive phase.

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38. True or False

Parenchyma is complex permanent tissue.

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39. Write 'True' or 'False'.

Sclerenchyma is a simple supportive tissue of highly thick walled cells.

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40. Write 'True' or 'False'.

In conjoint vascular bundles, xylem and phloem are present separately.

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41. Write 'True' or 'False'.

Root hair are multicelluar.

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42. Write 'True' or 'False'.

Mesophyll in dicot leaf is differentiated into palisade and spongy parenchyma.

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43. Write 'True' or 'False'.

In bicollateral vascular bundles, phloem and cambium are present on one side.

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44. Write 'True' or 'False'.

In closed vascular bundles, phloem and cambium are present on one side.

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45. Write 'True' or 'False'.

In closed vascular bundles, cambium is present.

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46. Write 'True' or 'False'.

Sap wood is meant for conduction of sap.

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47. Write 'True' or 'False'.

Casparian strips are present in the pericycle.

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48. Write 'True' or 'False'.

Pith is present in monocot root.

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49. Write 'True' or 'False'.

Stoma is surrounded by kidney shaped guard cells in monocots.

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50. Write 'True' or 'False'.

Lysigenous cavity is present in monocot stem.

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51. Write 'True' or 'False'.

Age of a tree can be known by counting its annual rings.

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52. Write 'True' or 'False'.

Phellogen is primary cambium.

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53. Write 'True' or 'False'.

The vascular strand which goes to leaf is called leaf trace.

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54. Fill in the following sentences with suitable words:

Protoderm give rise to .....

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55. Fill in the following sentences with suitable words:

Examples of secondary meristem are cork cambium and ..... Cambium.

Watch Video Solution

56. Fill in the following sentences with suitable words:

In radial vascular bundles, xylem and phloem pathes occur in..... patches.

Watch Video Solution

57. Fill in the following sentences with suitable words:

Pith is small or absent in ..... Roots.

Watch Video Solution

58. Fill in the following sentences with suitable words:

Vessels are present in.....

Watch Video Solution

59. Fill in the following sentences with suitable words:

In ..... type of bundle, in between xylem and phloem intrafasicular cambium is present.

Watch Video Solution

60. Fill in the following sentences with suitable words:

Xylem in roots is.....

Watch Video Solution

61. Fill in the following sentences with suitable words:

In dicot stem vessels are ..... .

Watch Video Solution

62. Fill in the following sentences with suitable words:

Vascular bundle in monocot stem is surrounded by ..... Sheath.

Watch Video Solution

63. Fill in the following sentences with suitable words:

Heart wood is ..... In colour.

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64. Choose the correct alternative.

Sap wood/Heart wood is dark brown in colour.

Watch Video Solution

65. Choose the correct alternative.

Pith in dicot root/monocot root is often absent.

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66. Choose the correct alternative.

Interfascicular cambium is a primary/secondary meristem.

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67. Choose the correct alternative.

Secondary growth does not occur in monocot/dicot stem.

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68. Choose the correct alternative.

A tracheid/vessel consists of row of cells placed one above the another.

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69. Choose the correct alternative.

Xylem and phloem lie together on same radius in collateral/radical type of vascular tissue system.

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70. Choose the correct alternative.

Fibres/sclereids are short, broad and occur individually or in small groups.

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71. Name the cavity found in the vascular bundles of monocot stems.

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72. Name the substance of which cuticle of leaf is made up of?

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73. From where do the secondary meristems appear?

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74. Name the tissue which acts as a sponge hygroscopic roots.

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75. In which type of stem, the vascular bundles are arranged in a ring?

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76. Which types of meristems can be classified on the basis of position in the plant body?

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77. Name the condition, when xylem is surrounded on all the sides by phloem.

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78. What are the characteristics of parenchyma? Give two examples of specialized parenchyma cells.

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79. Name tissue represented by jute fibres in making ropes.

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80. Which one out of root or stem shows endarch arrangement of xylem? What is meant by endarch arrangement?

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81. Name the two types of sieve elements found in phloem.

Watch Video Solution

82. Name the tissue provides mechanical strength to the plant organs.

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83. What makes the root's apical meristem sub-terminal?

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84. Where are companion cells located in flowering plants? What are their functions?

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85. Write function of casparian strips in plant tissue.

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86. What is the advantage of lignocellulose in wall of xylem?

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87. What is hard wood?

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88. A cross section of a plant material shows the following features under the microscope. There are many vacular bundles scattered in the parenchymatous tissue. Xylem is endrach. What kind of plant part shows the above anatomy.

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89. Name two example of fruits having sclereids.

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90. What use are of phloem fibres put to ?

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91. A cross section of a plant material shows the following features under the microscope:

vasculare bundles are radially arranged. These are four xylem strands showing exarch conditiobn. What is this plant part?

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92. What category of a permanent plant cell is a companion cell?

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93. The cross section of a plant material shows the followig anatomical features under the microscope:

vascular bundles are radially arranged.

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94. The cross section of a plant material shows the followig anatomical features under the microscope:

Four xylem strands with exarch condition of

rthe protoxylem. To which organ should it be assigned?

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95. Based on position, classify various types of meristems.

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96. Sieve tubes in angiosperms are associated with specialised parenchyma cells. Name those

cells. How do they help sieve tube members?

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97. Name the various component cells of xylem.Which of them does not have a nucleus?

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98. How are exarch and endarch conditions different anatomically in stem and root?

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99. How is it advantageous for an organism to be made of different kinds of cells instead of one kind?

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100. Give examples of secondary meristem.

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101. What are sclereids?

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102. If one debarks a tree, what parts of the plant is being removed?

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103. Below is a list of plant fibres. From which part of the plant these are obtained.

Coir

A. Hemp

B. Cotton

C. Jute

D.

Answer:

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104. Palm is monocotyledonous plant, yet it increases in girth. Why and how?

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105. What are sclereids?

Watch Video Solution

106. Name the tissue provides mechanical strength to the plant organs.

Watch Video Solution

107. What is an annual ring ?

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108. The cross section of a plant material shows the followig anatomical features under the microscope:

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109. The cross section of a plant material shows the followig anatomical features under the microscope:

Four xylem strands with exarch condition of rthe protoxylem. To which organ should it be assigned?

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110. Name the tissue represented by the jute fibres used in making ropes.

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111. Diagrammatically indicate the location of various endocrine glands in our body.

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112. Why a large number of stomata are present at the lower surface of the dicotyledonous leaves in the terrestrial plants?

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113. Draw a labelled diagram showing L.S. of phloem.

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114. Draw well labelled diagram of T.S. of monocot root.

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115. How would you distinguish monocots and dicots on the basis of three main characters?

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116. Name the cavity found in the vascular bundles of monocot stems.

Watch Video Solution

117. Differentiate between Tracheid and vessel.

Watch Video Solution

118. Differentiate between Parenchyma and collenchyma.

Watch Video Solution

119. Differentiate between Open and closed vascular bundles.

Watch Video Solution

120. Differentiate between sapwood and heartwood.

Watch Video Solution

121. Differentiate between stem hair and root hair.

Watch Video Solution

122. Mention two differences in the vascular bundles of sunflower and maize stems.

Watch Video Solution

123. Explain the structure and functions of collenchyma.

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124. List four elements of phloem.

Watch Video Solution

125. Write one anatomical features of C_4 plants.

Watch Video Solution

126. Describe the process of secondary growth in dicotyledons root.

Watch Video Solution

127. Describe Mond process.

Watch Video Solution

128. Discuss the shape of SF_6

Watch Video Solution

129. Describe the structure of monocot leaf.

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130. Periderm consititues cork cambium, cork and secondary cortex. What about bark?

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131. Trachedis are unicellular with size of fraction of a centimetre. The ends are tapering or oblique. The lumen is narrow. Write your views about vessels.

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132. Tyloses thickenings are seen in

A. Collenchyma

B. Phloem cells

C. Ray parenchyma only

D. Ray parenchyma and xylem cells

Answer:

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133. In a woody dicotyledonous tre, which of the following parts will mainly consist of primary tissues?

A. Stem and root

B. All parts

C. Shoot tips and root tips

D. flowers, fruits and leaves

Answer:

134. A meristematic region present between xylem and phloem of open vascular bundle is called

A. Medullary ray

B. Pericycle

C. Pith

D. Intrafascicus

Answer:

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135. Opening in the core tissue which permit exchange of gas between atmosphere and internal tissue is called

A. Complementary tissue

B. Periderm

C. Lenticel

D. Bark

Answer:

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136. Alburnum is also called as

A. Autumn wood

B. Heart wood

C. Sap wood

D. Spring wood

Answer:

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137. Which of the following statements is/are true?

Uneven thickening of cell wall is characterstic of sclerenchyma

Periblem forms the cortex of the stem and the root.

Tracheids are the chief water transporting elements in gymnosperms.

Companion cell is devoid of nucleus a maturity.

The commercial cork is obtained from Quercus suber.

A. Uneven thickening of cell wall is characterstics of sclerenchyma

B. Periblem forms the cortex of the stem and the root

C. Tracheids are the chief water transporting elements in gymnosperms

D. Companion cell is devoid of nucelus at maturity.

Answer:

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138. The way material deposited in the casparian strip of the endodermis is:

A. Pectin

B. Suberin

C. Cellulose

D. Lignin

Answer:

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139. The vascular cambial ring of a dicot stem is:

A. Primary in origin

B. Secondary in origin

C. Embryononic in origin

D. Tertiary in origin

Answer:

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140. Consider the following statements

A. In a dicot root, the vascualr bundles are collateral and endarch

B. The inner most layer of ortex in a dicot root is endodermis

C. In a dicot root, the phloem masses are separted from the xylem by parenchymatous cells that are known as conjuctive tissue

D.

Answer:

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141. Which of the following is true?

A. Vessels are unicellular and with narrow lumen

B. Vessels are multicellular and with wide lumen

C. Tracheids are multicellular and with narrow lumen

D. Tracheids are unicellular and with wide lumen

Answer:

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142. In annual ring, the light coloured part is known as

A. Early wood

B. Late wood

C. Heart wood

D. Sap wood

Answer:

Watch Video Solution

143. Patsun/Jute fibre is obtained from

A. Secondary phloem

B. Pith

C. Xylem

D. Endoderms

Answer:

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

A. Maturing

B. Elongating

C. Widening

D. Differentiating.

Answer:

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145. In barley stem vascular bundles are:

A. Open and scattered

B. Closed and scattered

C. Open and in a ring

D. Closed and radial

Answer:

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146. Anatomically fairly old dicotyledonous root is distinguished from the dicotyledonous stem by:

A. Absence of secondary xylem

B. Absence of secondary phloem

C. Presence of cortex

D. Position of protoxylem

Answer:

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147. Palisade parenchyma is absent in leaves of:

A. Sorghum

B. Mustard

C. Soybean

D. Gram

Answer:

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148. Reduction in vascular tissue, mechanical tissue and cuticle is characterstic of

A. Xerophytes

B. Mesophytes

C. Epiphytes

D. Hydrophytes

Answer:

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149. In dicotyledonous roots, the initiation of lateral roots takes place in

A. Endodermal cells

B. Cortical cells

C. Epidermal cells

D. Procambial cells

Answer:

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150. In grasses, certain adaxial epdiermal cells along the veins modify themselves into large empty, colourless cells called

A. Bulliform cells

B. Companion cells

C. Guard cells

D. Subsidiary cells

Answer:

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151. Function of companion cells is

A. Loading of sucrose into sieve elements by passive transport

B. Loading of sucrose into sieve elements

C. Providing energy to sieve elements for active transport

D. Providing water to phloem

Answer:

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152. Some vascular buncles are described as open because these

A. Possess conjunctive tissue between xylem and phloem

B. Are not surrounded by pericycle

C. Are surrounded by pericycle but not endodermis

D. Are capable of producing secondary xylem and phloem

Answer:

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153. 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:

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154. A dicot plant in which scattered vascular bundles are present in stem is

A. Yucca

B. Pepermia

C. Dolichos

D. Helianthus

Answer:

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155. The long plants are capable of standing erect due to presence of

A. Sclerenchyma

B. Collenchyma

C. Parenchyma

D. Prosenchyma

Answer:

Watch Video Solution

156. Which of the followng contributes the most to water conduction in plants?

A. Sieve tubes Xylem vessels

B. Trachea

C. Sieve cells

D. Xylem vessels

Answer:

Watch Video Solution

157. Radial conduction of water takes place by

A. Vessels

B. Vessels and tracheids

C. Phloem

D. Ray parenchyma cells

Answer:

Watch Video Solution

158. Pear fruits are gritty due to the presence of

A. Trachieds

B. Vessels

C. Fibres

D. Sclereids

Answer:

Watch Video Solution

159. Tracheids differ from other tracheary elements in

A. Having casparian strips

B. Being imperforate

C. Lacking nucelus

D. Being lignified

Answer:

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160. Centrifugal development of xylem occurs in

A. Stem

B. Root

C. Leaf

D. Flower

Answer:

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161. The term bark refers to

A. Phellem, phelloderm, and vascular cambium

B. Periderm and secondary xylem

C. cork cambium and cork

D. Phellogen, phellum, phelloderm, and secondary phloem

Answer:

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162. Epidermis is produced from

A. Ground meristem

B. Phellogen

C. Procambium

D. Protoderm

Answer:

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163. A simple living permanent tissue absent in roots is

A. Collenchyma

B. Chlorenchyma

C. Parenchyma

D. Aerenchyma

Answer:

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164. What annatomical structure will you use to distinguish between old dicot stem and old dicot root?

A. Secondary phloem

B. Protoxylem

C. Cortical cells

D. Secondary xylem

Answer:

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165. Closed vascular bundles lack

A. Cambium

B. Pith

C. Ground tissue

D. Conjunctive tissue

Answer:

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166. Cortex is the region found between

A. Epidermis and stele

B. Pericycle and endodermis

C. Endodermis and pith

D. endodermis and vascular bundle

Answer:

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167. Conifers are adapted to tolerate extreme environment condition because of

A. Broad haedy leaves

B. Superficial stomata

C. Thick cuticle

D. Hemicellulose

Answer:

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168. Component of cell wal of fungi is

A. Chitin

B. Peptidoglycan

C. Cellulose

D. Presence of vessels

Answer:

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169. Specialised epidermal cells surrounding the guard cells are called

A. Complimentary cells

B. Subsidiary cells

C. Bulliform cells

D. Lanticels

Answer:

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170. Intercalary meristem results in:

A. Secondary growth

B. Primary growth

C. Apical growth

D. Secondary thickening

Answer:

Watch Video Solution

171. Vascular bundle is closed when

A. Cambium present

B. Cambium absent

C. Pericycle absent

D. None of these

Answer:

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172. In dicot stem, Vascular bundles are

A. Numerious scattered

B. Arranged in a ring

C. Without cambium

D. Surrounded by bundle sheath

Answer:

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173. Apical stem of shoot apex is

A. Intercalary meristem

B. Lateral meristem

C. Primary meristem

D. Secondary meristem

Answer:

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174. Which tissue is living mechanical tissue?

A. Phloem

B. parenchyma

C. Collenchyma

D. Sclerenchyma

Answer:

Watch Video Solution

175. Periderm is formed by

A. Phellem

B. Phelloderm

C. Phellogen

D. All of these

Answer:

Watch Video Solution

176. In a woody dicotyledonous tre, which of the following parts will mainly consist of primary tissues?

A. All parts

B. Stem and root

C. Flowers, fruits and leaves

D. shoot tip and root tip

Answer:

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177. Interfascicular cambium and cork cambium are formed due to

A. Ground meristem

B. Apical meristem

C. Intercalary meristem

D. Lateral meristem

Answer:

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178. Intercalary meristem is located in

A. Petiole and internode

B. Stem tip

C. Root

D. Bud

Answer:

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179. The cells which help in rolling and unrolling of leaf lamina in grasses are

A. complementary cells

B. Motor cells

C. Passage cells

D. Companion cells

Answer:

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180. Vascular bundles having phloem on periphery of outer and inner cambium are called

A. Bicollateral open vascular bundles

B. Bicollateral, conjoint closed vascular bundles

C. Amphivasal, conjoint closed vascular bundles

D. Collateral, radial open vascular bundles

Answer:

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181. Epiblema is characteristic of

A. Monocot roots

B. Dicot stems

C. Dicot roots

D. Monocot stems

Answer:

Watch Video Solution

182. Which one of the following statements is wrong?

A. Cork lacks stomata, but lenticels carry out transpiration

B. Passage cells help in transfer of food form cortex to phloem

C. Sieve tube elements possess cytoplasm but not nuclei

D. The shoot apical meristem has a quiescent centre.

Answer:

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183. Cork tissue arises from

A. Periderm

B. Phellogen

C. Phelloderm

D. Phellem

Answer:

Watch Video Solution

184. Inner, darker and harder portion of secondary xylem that cannot conduct water, in an older dicot stem, is called

A. Albumum

B. Bast

C. Wood

D. Duramen

Answer:

Watch Video Solution

185. How a dicot leaf differs anatomically from a monocot leaf?

A. Parallel venation

B. Differentiation of palisade and spongy parenchyma

C. Stomata only on upper side

D. Stomata on both sides

Answer:

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Example

1. State the location and function of different types of meristems.

2. Cork cambium forms tissues that form the cork. Do you agree with this statement? Explain

3. Explain the process of secondary growth in the stems of woody angiosperms with the help of schematic diagrams. What is its significance?

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4. Draw illustrations to bring out the anatomical difference between: Monocot root and Dicot root

Watch Video Solution

5. Draw illustrations to bring out the anatomical difference between: Monocot stem and Dicot stem

Watch Video Solution

6. Cut a transverse section of young stem of a plant from your school garden and observe it under the microscope. How would you ascertain whether it is a monocot stem or a dicot stem? Give reasons.

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

the vasucular bundles are conjoint, scattered and surrounded by a sclerenchymatous bundle sheaths.

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

the vasucular bundles are conjoint, scattered and surrounded by a sclerenchymatous bundle sheaths.

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9. Why are xylem and phloem called complex tissues?

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10. What is stomatal apparatus? Explain the structure of stomata with a labelled diagram.

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11. Name the three basic tissue systems in the flowering plants. Give the tissue names under each system.

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12. How is the study of plant anatomy useful to us?

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13. What is periderm? How does periderm formation take place in the dicot stems?

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14. Describe the internal structure of a dorsiventral leaf with the help of labelled

diagrams.

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15. A transverse section of stem is stained first with safranin and then with fast green following the ususal schedule of double staining for the preparation of a permanent slide. What would be colour of the stained xylemand phloem?

A. Red and green

B. Green and red

C. Orange and yellow

D. Purple and orange

Answer:

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16. Identify the tissue system from among the following

A. Parenchyma

B. Xylem

C. Epidermis

D. Phloem

Answer:

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17. Cells of this tissue are living and show angular wall thickening. They also provide mechanical support. The tissue is

A. Xylem

B. Sclerenchyma

C. Collenchyma

D. Epidermis

Answer:

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18. Epiblema of roots is equivalent to

A. Pericycle

B. Endodoermis

C. Epidermis

D. Stele

Answer:

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19. A conjoint and open vascular bundle will be observed in the transverse section of

A. Monocot root

B. Monocot stem

C. Dicot root

D. Dicot stem

Answer:

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20. Interfascicular cambium and cork cambium are formed due to

A. Cell division

B. Cell differentiations

C. Cell dedifferentation

D. Redifferentiation

Answer:

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21. Phellogen and Phellem respectively denote

A. Cork and cork cambium

B. Cork cambium and cork

C. Secondary cortex and cork

D. Cork and secondary cortex

Answer:

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22. In which of the following pairs of parts of a flowering plant is epidermis absent?

A. Root tip and shoot tip

B. Shoot bud and floral bud

C. Ovule and seed

D. Petiole and pedicel

Answer:

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23. How many shoot apical meristems are 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:

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24. A piece of wood having no vessels must belong to :

A. Teak

B. Mango

C. Pine

D. Palm

Answer:

25. A plant tissue, when stained , showed the presence of hemicellulose and pectin in cell wall of its cells. The tissue represents.

A. Collenchyma

B. Sclerenchyma

C. Xylem

D. Meristem

Answer:

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26. Fibres are likely to be absent in

A. Secondary phloem

B. Secondary xylem

C. Primary phloem

D. Leaves

Answer:

Watch Video Solution

27. When we peel the skin of a potato tuber, we remove

A. Periderm

B. Epidermis

C. Cuticle

D. Sapwood

Answer:

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28. A biotechnologist wanted to create a colony of E.coli possessing the plasmid pBR322, sensitive to Tetracycline. Which one of

the following restriction sites would he use to ligate a foreign DNA?

A. Pinus

B. Eucalyptus

C. Grass

D. Trochodendron

Answer:

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29. Which one of the following cell types always divides by anticlinal cell division?

A. fusiform initial cells

B. root cap

C. protoderm

D. phellogen

Answer:

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30. What is the fate of primary xylem in a dicot root showing extensive secondary growth?

A. It is retained in centre the of the axis

B. It gets crushed

C. May or many not get crushed

D. It gets surrounded by primary phloem

Answer:

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31. Product of photosynthesis is transported from the leaves to various parts of the plants and stored in some cells before being utilised. What are the cells/tissues store them?

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32. Protoxylem is the first formed xylem. If the protoxylem lies next to phloem what kind of arrangement of xylem would you call it?

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33. What is the function of phloem parenchyma?

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34. What is present on the surface of the leaves which helps the plant prevent loss of water but is absent in roots?

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35. What is the epidermal cell modification in pants which prevents water loss?

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36. What part of the plant would show the following:

Radial vascular bundles

Polyarch xylem

Well developed pith

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37. What part of the plant would show the following Polyarch xylem

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38. What part of the plant would show the following Well developed pith

Watch Video Solution

39. What are the cells that make the leaves curl in plants during water stress?

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40. What constitutes the cambial ring?

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41. Give one basic functional difference between phellogen and phelloderm.

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42. Arrange the following in the sequnce you would find them in a plant starting from the periphery-phellem, phellogen, phelloderm.

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43. If one debarks a tree, what parts of the plant is being removed?

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44. The cross section of a plant material shows the followig anatomical features under the microscope:

vascular bundles are radially arranged.

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45. The cross section of a plant material shows the followig anatomical features under the microscope:

Four xylem strands with exarch condition of

rthe protoxylem. To which organ should it be assigned?

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46. What do hard wood and soft wood strand for?

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47. While eating peach or pear it is usually seen that some stone like structures get

entagled in the teeth. What are these stone like structures called?

Watch Video Solution

48. What is the commercial sources of cork. How is it formed in plant?

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49. Below is a list of plant fibres. From which part of the plant these are obtained.

Coir

Watch Video Solution

50. Below is a list of plant fibres. From which part of the plant these are obtained.

Hemp

Watch Video Solution

51. Below is a list of plant fibres. From which part of the plant these are obtained.

cotton

Watch Video Solution

52. Below is a list of plant fibres. From which part of the plant these are obtained.

Jute

Watch Video Solution

53. What are the charcteristic differences found in the vascular tissue of gymnosperms

and angiosperms?

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54. Epidermal cells are often modified to perform specialized functions in plants. Name some of them and function they perform.

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55. The lawn grass(Cyandon dactylon) needs to be mowed frquently to prevent its overgrowth.

Which tissue is resonsible for its rapid growth?

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56. Plants require water for their survival. But when watered excessively, Plants die. Discuss.

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57. A transverse section of the trunk of a tree shows concentric rings which are known as

growth rings. How aree these rings formed? What is the significance of these rings?

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58. Trunks of some of the aged tree species appear to be composed of serveral fused trunks. Is it a physio-logical or anatomical abnormality?

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59. What is the difference between lenticel and stomata?

Watch Video Solution

60. Write the pricise function of Sieve tube

Watch Video Solution

61. Write the pricise function of

Interfasicular cambium

Watch Video Solution

62. Write the pricise function of

Collenchyma

Watch Video Solution

63. Write the pricise function of

Aerenchyma

Watch Video Solution

64. The stomatal pore is grarded by two kidney shaped guard cells. Name the epidermal cell surrounding the guard cells. How does a guard cell differ from an epidermal cell? Use a diagram to illustrate your answer.

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65. Point out the differences in the anatomy of, leaf of peepal and maiza. diagram and label the differences.

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66. Palm is monocotyledonous plant, yet it increases in girth. Why and how?

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67. The arrangement of ovules within the ovary is known as placentation. What does the term placenta refer to?

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68. Decidous plants shed their leaves during hot summer or in autumn. This process of shedding of leaves is called abscision. Apart from phsiclogical changes what anatomical mechanism is involved in the absicission of leaves.

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69. Is Pinus an evergreen tree? Comment.

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70. Each of the following terms has some anatomical significance. What do these terms mean? Explain with the help of line diagram

Plasmadesmosomes / Plasmodesmata

Watch Video Solution

71. Each of the following terms has some anatomical significance. What do these terms mean? Explain with the help of line diagram

Middle lamella

Watch Video Solution

72. Each of the following terms has some anatomical significance. What do these terms mean? Explain with the help of line diagram

Secondary wall

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73. Distinguish between the following:

exarch and endarch condition of protoxylem

Watch Video Solution

74. Distinguish between the following:

Stele and vasular bundle

Watch Video Solution

75. Distinguish between the following:

Protoxylem and metaxylem

Watch Video Solution

76. Distinguish between the following:

Interfasicular cambium and intrafaicular cambium

Watch Video Solution

77. Distinguish between the following:

Open and closed vascular bundles

Watch Video Solution

78. Distinguish between the following:

Stem hair and root hair.

Watch Video Solution

79. Name any two lateral meristems in plants.

Watch Video Solution

80. Why xylem vessels are called syncytes?

Watch Video Solution

81. Write about the chemical composition of collenchyma cells.

Watch Video Solution

82. What are fibres?

Watch Video Solution

83. What are sclereids?

Watch Video Solution

84. From which part of the plant coir and hemp are obtained?

Watch Video Solution

85. Why the colour of heart wood is dark?

Watch Video Solution

86. Mention the constituents of periderm.

Watch Video Solution

87. Write the functions of phellogen and phelloderm.

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88. Why is root apical meristem subterminal?

Watch Video Solution

89. Classify vascular bundles on the basis of position of protoxylum.

Watch Video Solution

90. Write characteristics of shoot apex.

Watch Video Solution

91. What is open type of vascular bundle?

Watch Video Solution

92. Write any four characteristics of cleavage.

Watch Video Solution

93. Define aerenchyma.

Watch Video Solution

94. What is pro-meristem?

Watch Video Solution

95. Fill in the blanks :

In prisere, in aquatic medium like..... The pioneer plants are .....

Watch Video Solution

96. Fill in the blanks :

..... Growth is increase in girth. It is caused by ..... meristem.

Watch Video Solution

97. Fill in the blanks :

Transport of water from cortex to ..... is controlled by..... Cells.

Watch Video Solution

98. Fill in the blanks :

Maize and ..... are monoecious plants

Watch Video Solution

99. Fill in the blanks :

Micro-organism like..... Acts as a pesticide, while..... acts as a biofertilizer.

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100. These questions consist of two statement each, printed as Assertion and Reason. While answering these questions, you are required to choose any one of the following four responses. A. If both Assertion and Reason are true and Reason is a correct explanation of the Assertion. B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion. C. If Assertion is true but Reason is false. D. If both Assertion and Reason are false.

Assertion: Vessels are made up of row of cells placed one aboe the another with their intervening walls (septa) absent due to dissolution. Reason. Sieve tubes are tubular channels. In tracheids walls are thick.

A. A

B. B

C. C

D. D

Answer:

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101. These questions consist of two statement each, printed as Assertion and Reason. While answering these questions, you are required to choose any one of the following four responses. A. If both Assertion and Reason are true and Reason is a correct explanation of the Assertion. B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion. C. If Assertion is true but Reason is false. D. If both Assertion

and Reason are false.

Assertion: There is large deposition of lignin in the lumen of tracheids. Reason. The lumen of tracheids is narrow.

A. A

B. B

C. C

D. D

Answer:

 Watch Video Solution

102. These questions consist of two statement each, printed as Assertion and Reason. While answering these questions, you are required to choose any one of the following four responses. A. If both Assertion and Reason are true and Reason is a correct explanation of the Assertion. B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion. C. If Assertion is true but Reason is false. D. If both Assertion and Reason are false.

Assertion: collateral bundles are of open type.

Reason. Dicot stem bears cambium in the vascular bundles.

A. A

B. B

C. C

D. D

Answer:

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103. These questions consist of two statement each, printed as Assertion and Reason. While answering these questions, you are required to choose any one of the following four responses. A. If both Assertion and Reason are true and Reason is a correct explanation of the Assertion. B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion. C. If Assertion is true but Reason is false. D. If both Assertion and Reason are false.

Assertion: In monocot stem, vascular bundle

are arranged in a ring. Reason: Stele is of dictyostele type.

A. A

B. B

C. C

D. D

Answer:

 Watch Video Solution

104. These questions consist of two statement each, printed as Assertion and Reason. While answering these questions, you are required to choose any one of the following four responses. A. If both Assertion and Reason are true and Reason is a correct explanation of the Assertion. B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion. C. If Assertion is true but Reason is false. D. If both Assertion and Reason are false.

Assertion: Secondary xylem formed during

spring is called spring wood and secondary xylem formed in autumn is called autum wood. Reason. Spring wood and autumn wood is easily demarcated and leads to the formation of annual rings.

A. A

B. B

C. C

D. D

Answer:

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Watch Video Solution

105. These questions consist of two statement each, printed as Assertion and Reason. While answering these questions, you are required to choose any one of the following four responses. A. If both Assertion and Reason are true and Reason is a correct explanation of the Assertion. B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion. C. If Assertion is true but Reason is false. D. If both Assertion

and Reason are false.

Assertion: In bark all the cells are dead. Reason. Bark constitutes secondary cortex, epidermis, cork etc.

A. A

B. B

C. C

D. D

Answer:

Watch Video Solution

106. These questions consist of two statement each, printed as Assertion and Reason. While answering these questions, you are required to choose any one of the following four responses. A. If both Assertion and Reason are true and Reason is a correct explanation of the Assertion. B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion. C. If Assertion is true but Reason is false. D. If both Assertion and Reason are false.

Assertion: Vascular cambium is considered as lateral. Reason. It gives rise to lateral shoots.

A. A

B. B

C. C

D. D

Answer:

Watch Video Solution

107. These questions consist of two statement each, printed as Assertion and Reason. While answering these questions, you are required to choose any one of the following four responses. A. If both Assertion and Reason are true and Reason is a correct explanation of the Assertion. B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion. C. If Assertion is true but Reason is false. D. If both Assertion and Reason are false.

Assertion: The quiescent centre acts as a

reservoir of relatively resistant cells which consitute a permanent source of active initials. Reason. The cells of the inactive region of quiescent centre become active when the previous active initials get damaged.

A. A

B. B

C. C

D. D

Answer:

Watch Video Solution

Watch Video Solution

108. These questions consist of two statement each, printed as Assertion and Reason. While answering these questions, you are required to choose any one of the following four responses. A. If both Assertion and Reason are true and Reason is a correct explanation of the Assertion. B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion. C. If Assertion is true but Reason is false. D. If both Assertion

and Reason are false.

Assertion: In collateral vascular bundles, phloem is situated towards inner side. Reason. In monocot stem, cambium is present.

A. A

B. B

C. C

D. D

Answer:

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109. Give reason for the following:

In pteriodophytes, one cell consitute the meristem.

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110. Give reason for the following:

Primary meristems persist throughout the life.

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111. Give reason for the following:

Chorenchyma is a type of parenchyma.

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112. Give reason for the following:

Sclerenchyma fibres and sclereids are both types of sclerenchyma.

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113. Give reason for the following:

In monocot roots and dicot roots, protoxylem lies towards inside of metaxylem.

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