BIOLOGY

BOOKS - NIKITA PUBLICATION

PLANT TISSUE AND ANATOMY

Exercise

1. The term 'meristem' was given by.....

A. Nageli

B. Hanstein

C. Grew

D. M. Malpighi

Answer:

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2. The group of young unspecilized cells having capacity of division is called as

A. epithelial tissue

B. Meristematic tissue

C. simple tissue

D. complex tissue

Answer:

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3. What is the meaning of meristos

A. unable to divide

B. permenant

C. divisible

D. complex

Answer:

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4. Meristematic cells have

A. thin wall and undifferentiated

B. dense cytoplasm, without reserve food

C. large prominent nucleus

D. all of these

Answer:

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5. The meristematic cells are

A. ability to divide

B. compactly arranged without intercellular spaces

C. plastids in proplastid stage

D. all of these

Answer:

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6. The pro, primary, secondary meristem classification on

A. position

B. function

C. origin

D. division

Answer:

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7. Which of the following meristem is called as embryonal or primordial meristem.... Which meristem forms primary permanent tissue of primary plant body...

A. primary meristem, secondary meristem

B. secondary meristem, primary meristem

C. promeristem, primary meristem

D. tertiary meristem, primary meristem

Answer:

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8. The examples of primary meristem are

A. protoderm

B. procambium

C. ground meristem

D. all of these

Answer:

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9. Which meristem is responsible for growth, elongation of organs, occurs at the tip of roots, shoots.... and meristem present at base of node, internode, base of leaf is.....

A. apical, intercalary

B. intercalary, apical

C. promeristem, intercalary

D. cambium, intercalary

Answer:

10. The meristem present between regions of permanent tissue and disappear to give rise permanent tissue

A. apical

B. intercalary

C. promeristem

D. lateral

Answer:

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11. Intercalary meristem and apical meristems are responsible for Increase in.....

A. Length

B. Breadth

C. Girth or diameter

D. all of these

Answer:

12. The meristem occurs parallel to long axis of stem and root

A. apical

B. intercalary

C. promeristem

D. lateral

Answer:

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13. Which of the following is false statement about lateral meristem

A. initial cells divide mainly in one plane (perclinal)

B. it increase diameter of organ

C. it is found in gymnosperm and dicots

D. it is common in all angiosperms

Answer:

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14. Choose the correctly matched options:

Meristem	Position	Origin
1) Primary	Extremes of the plant axis	Embryonic
2) Intercalary	Between permanent tissues	Secondary
3) Lateral	Parallel to the plant axis and close to plant axis	Primary or Secondary
4) Secondary	Close to plant axis andparallel to plant surface.	Embryonic

A. 1 and 2

B. 2 and 4

C. 1 and 3

D. 2 and 3

Answer:

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15. All of the following are true except

A. During the formation of leaves and elongation of stem, some cells'left behind' from shoot apical meristem, constitute the axillary bud in axil of leaves forms branch or flower

B. The meristem which occurs between mature tissues is known as intercalary meristem.

C. Both apical meristems and intercalary meristems are primary meristems

D. Apical meristem increase the length while intercalary meristem increase diameter

Answer:

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16. Statement (A) The meristem that occursin the mature regions of roots and shoots of many plants is called the secondary or lateral meristem. (B) Fascicular cambium, interfascicular cambium and cork-cambium are examples of lateral meristems. (C) These are responsible for producing the secondary tissues.

A. A, B correct, C wrong

B. A, C correct B wrong

C. B,C correct A wrong

D. all statements are correct

Answer:

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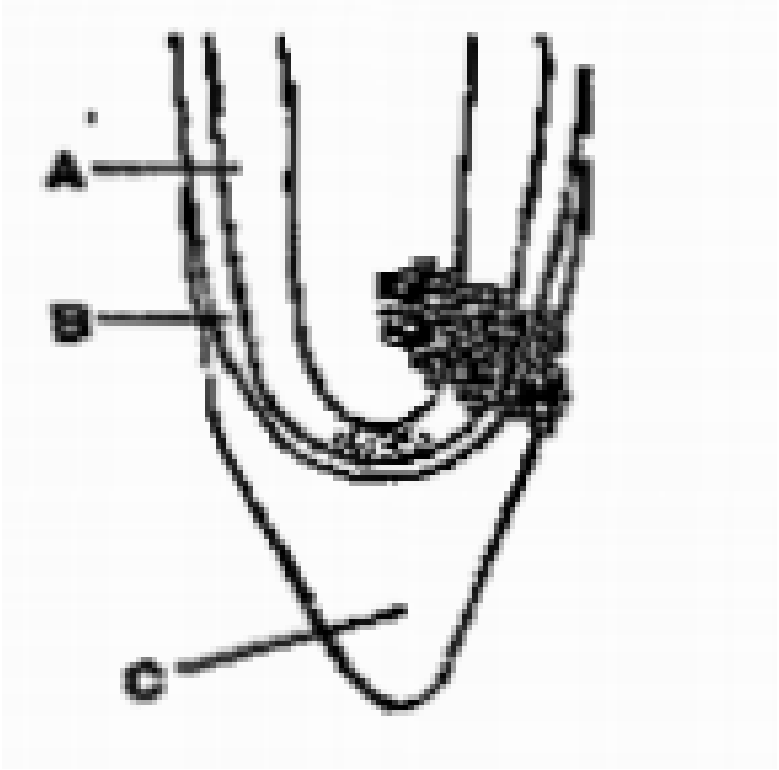
17. Select the option that correctly identifies the labeling A, B and C in the given figure

showing section of root apical meristem



A. Cortex, Protoderm, Root cap

B. Protoder, Cortex, Root cap

C. Hypodermis, Epidermis, Cortex

D. Tunica, Protoderm, Root cap

Answer:

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18. Read the following statements regarding meristematic cells and select the correct ones. (i) Cells possess the ability to grow and divide.(ii) Cells have dense cytoplasm with prominent nucleus.(iii)Cells are without intercellular spaces. (iv) Vacuoles are either absent or smaller in size (v) The plastids are in

proplastid stage and cells do not store reserve food material.

A. all

B. ii and iii

C. I and iii

D. I, ii and iii

Answer:

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19. How many of the following are examples of lateral meristem ? (Cork cambium, Intercalary meristem, Intrafascicular cambium, Interfascicular cambium, Apical meristem)

A. 4

B. 3

C. 2

D. 1

Answer:

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20. Both apical meristems and intercalary meristems are_____meristems.

A. primary

B. secondary

C. lateral

D. both (b) and (c)

Answer:

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21. Which of the following tissues has dead cells with thick and lignified cell walls, having a few or numerous pits ?

A. Sclerenchyma

B. Collenchyma

C. Xylem

D. Phloem

Answer:

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22. _____1___ tissues are of 3 types ____2 ____3 _____and ____4 _____. Cells of _____2 ___are living cells without inter-cellular spaces. These provide mechanical support. Cells of_ 3_ are generally isodiametric and form the major component of plants organs. Cells of___ 4___ possess lignified cell walls and are usually dead

A. 1-simple, 2-parenchyma, 3-collenchyma, 4-sclerenchyma

B. 1-simple, 2-collenchyma, 3-parenchyma, 4-sclerenchyma

C. 1-complex, 2-collenchyma, 3-sclerenchyma, 4-parenchyma

D. 1- simple, 2-parenchyma, 3-collenchyma, 4-sclerenchyma

Answer:

23. Increase in girth of the plant as a result of the activities of primary and secondary lateral meristems is called

A. primary growth

B. lateral growth

C. secondary growth

D. intercalary growth

Answer:

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24. Select the incorrect pair out of the following.

A. Parenchyma-Storage, photosynthesis

B. Sclerenchyma-Mechanical strength

C. Xylem-movment of sap

D. Phloem-Conduction of water and minerals

Answer:

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25. Which of the following features is unrelated to collenchyma in plants?

A. Cell wall thickening-cellulose, hemi-cellulose and pectin

B. Intercellular space-developed

C. Main function-mechanical support

D. Chloroplast-may or may not be present

Answer:

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26. Which is the characteristic feature of permanent tissue?

A. cells are well differentiated

B. they lost power of division

C. living or dead

D. all of these

Answer:

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27. The simple permanent tissue consist of

A. two types of cells

B. only one type of cells

C. cells of common origin, and function

D. both (b) and (c)

Answer:

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28. Statements (A) Parenchyma forms major component within organs. (B) The cells of the parenchyma are generally isodiametric. They may be spherical, oval, round, polygonal or elongated in shape. (C) Their walls are thin and made up of cellulose. They are loosely arranged and have intercellular spaces.

A. A, B correct, C wrong

B. A, C correct B wrong

C. B,C correct A wrong

D. all statements are correct

Answer:

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29. Cells of parenchyma are characterized by presence of:

A. Uniform thickness

B. More thick corners

C. Lignification

D. Suberisation

Answer:

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30. Which of the following is most simple tissue in organs and primitive tissue present in all parts of plant

A. meristematic tissue

B. collenchymas

C. sclerenchyma

D. parenchyma

Answer:

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31. Parenchyma cells having chloroplasts constitute

A. Chlorophylls parenchyma

B. Collenchyma

C. Chlorenchyma

D. Arenchyma

Answer:

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32. Starch is mainly manufactured by:

A. Palisade mesophylls

B. spongy mesophylls

C. Guard cells

D. Epidermal cells

Answer:

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33. In hydrophytes aerenchyma is type of parenchyma helps to ...

A. give rigidity to plant body

B. to give mechanical support

C. acts as packing material

D. providing buoyancy in hydrophytes

Answer:

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34. If fibre like elongated cells present in parenchyma it is called as

A. Prosenchyma

B. collenchyma

C. Chlorenchyma

D. Aerenchyma

Answer:

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35. Parenchyma differ from collenchymas in its:

A. Cell wall composition

B. Thickness of cell wall

C. Cytoplasmic content

D. Having cell organelles and cytoplasm

Answer:

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36. A simple tissue with mechanical and physiological functions in a young dicotyledons plants

A. Sclerenchyma

B. Phloem

C. Stone cells

D. Collenchyma

Answer:

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37. Which of the following living cells give the mechanical support and strength to plants?

A. Sclerenchyma

B. Phloem

C. Stone cells

D. Collenchyma

Answer:

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38. The collenchymas shows the deposition of ...at the corners

A. lignin, cellulose, hemicellulose and pectin

B. cellulose, hemicellulose and pectin

C. suberin, cellulose, hemicellulose and pectin

D. chitin, cellulose, hemicellulose and pectin

Answer:

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39. Collenchyma is present in

A. hypodermis of dicot stem and leaves

B. dicot root

C. monocot stem

D. monocot root

Answer:

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40. Which of the following is wrong?

A. collenchymas consists of cells which are much thickened at the corners due to a

deposition of cellulose, hemicellulose and pectin, intercellular spaces are absent.

B. a consists of long, narrow cells with thick and lignified cell walls having a few or numerous pits

C. Collenchymatous cells may be oval, spherical or polygonal and often contain chloroplasts

D. These cells assimilate food when they contain chloroplasts. They provide mechanical support to the growing parts

Answer:

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41. Vascular tissues of angiosperms differ from those of gymnosperms in

A. presence of vessels in the xylem

B. presence of well developed sieve tubes in phloem

C. presence of companion cells in phloem

D. all of these

Answer:

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42. Match Column-1 with Column-11 and select the correct option from the codes given below.

Column-I	Column-II
A. Vessels	i) Cells are living function-storage of food
B. Trachids	ii) Cells possess highly thickened walls with obliterated central lumen
C. Xylem fibres	iii) Wide pipes in xylem of angiosperm
D. Xylem parenchyma	v) tube-like thick, lignified cells having tapering ends common in all tracheophytes

A. A-v, B-iii, C-ii, D-i

B. A-iii, B-v, C-ii, D-i

C. A-ii, B-v, C-iii, D-i

D. A-v, B-ii, C-iii, D-i

Answer:

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43. Thickening of cell wall, lignification and specialization for mechanical function are characteristics of :

A. Sclerenchyma

B. Collenchyma

C. Chlorenchyma

D. parenchyma

Answer:

44. The cells of which tissue are living in beginning having protoplasm but dead,impermeablein later stage

A. Parenchyma-Storage, photosynthesis

B. collenchyma

C. sclerenchyma

D. chlorenchyma

Answer:

45. Sclereids are present in

A. fruit walls of nuts

B. grit of guava and pear

C. seed coats of legumes

D. all of these

Answer:

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46. Find the wrong match.

A. Meristematic tissue-ability of division

B. Xylem-conduction of water

C. Phloem- complex permanent tissue

D. Sclerenchyma-living simple tissue

Answer:

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47. Sclerenchyma consists of

A. long, narrow cells with thick and lignified cell walls having a few or numerous pits

B. sclerenchyma may be either fibres or sclereids

C. They are usually dead and without protoplasts

D. all of these

Answer:

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48. The sclereids are

A. spherical, oval or cylindrical, highly thickened dead cells with very narrow

cavities (lumen).

B. These are commonly found in the fruit walls of nuts, pulp of fruits like guava, pear and sapota, seed coats of legumes and leaves of tea

C. Sclerenchyma provides mechanical support to organs.

D. all of these

Answer:

49. Fibres occurs in

A. Xylem, phloem and sclerenchyma

B. leaves, petioles

C. pericycle, endodermis

D. all of these

Answer:

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50. Why xylem and phloem are called as complex tissue

A. they are only one type of cells

B. they are made up of sclerenchyma

C. they only gives mechanical support

D. they are made up of many types of cells

Answer:

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51. Wood is common name for....

A. Vascular bundles

B. Secondary xylem

C. All tissue which from a plant body

D. Phloem

Answer:

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52. The tracheids are most prominent (90-95%) in

A. dicot

B. monocot

C. angiosperm

D. gymnosperm

Answer:

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53. An elongated cell with tapering ends & main conducting elements in most of tracheophytes is termed

A. Collenchyma

B. Vessel

C. Sclerencyma

D. Tracheids

Answer:

54. A tracheid is distinguished from a vessel element on the basis of

A. side wall thickening

B. end-wall perfomation

C. length

D. diameter

Answer:

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55. Hydrome is the synonym to one of the following tissues

A. Phloem parenchyma

B. Sieve tubes

C. Xylem

D. Secretory tissue

Answer:

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56. The most advanced type of thickening is

A. scallariform

B. annular

C. pitted

D. spiral

Answer:

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57. Water conducting elements of Gymnosperms and primitive angiosperms are

A. Vessels

B. Xylem Parenchyma

C. Tracheids

D. Fibre tracheids

Answer:

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58. Which elements are present in all vascular plants?

A. tracheids

B. vessels

C. sieve cells

D. companion cells

Answer:

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59. The main water conducting elements of higher angiosperms and few gymnosperm are

A. Vessels

B. Xylem Parenchyma

C. Tracheids

D. Fibre tracheids

Answer:

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60. Which of the following is false statement

A. tracheids are long and have narrow lumen

B. vessels have large diameter and have wider lumen

C. vessels have transverse end plates

D. tracheids are more evolved than vessels

Answer:

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61. Vessels are present in

A. some gymnosperms like gnetales

B. angiosperm

C. some pteridophytes

D. all of these

Answer:

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62. Which of the following is true for vessels?

A. vessels of primary xylem develops from procambium

B. vessels of secondary xylem develops from vascular cambium

C. tracheids have thickening and they are absent in vessels

D. both a and b

Answer:

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63. The thickenings present in vessels & tracheids are

A. sprial, scalariform

B. pitted

C. annular

D. all of these

Answer:

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64. Among the tracheids and vessels which are more evolved elements

A. vessels

B. tracheids

C. both are highly evolved

D. both are present in all vascular plants

Answer:

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65. Which elements of xylem helps in conduction of water and minerals as well as mechanical support

A. Vessels

B. Xylem Parenchyma, fibres

C. Tracheids

D. both a and c

Answer:

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66. The elements of xylem helps in storage & living is

A. Vessels

B. Xylem Parenchyma

C. Tracheids

D. xylem fibres

Answer:

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67. Identify the false statement

A. vessels are rounded in monocot and angular in dicot

B. advanced flowering plants produces tracheid and vessels

C. Primary xylem id dervied from procambium

D. all gymnosperms have tracheids and angiosperms have vessels only

Answer:

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68. Read the followingstatements... (A) When protoxylem towards centre and metaxylem periphery-endarch (B) In roots protoxylem towards periphery and metaxylem towards centre- exarch (C) In stem, protoxylem towards centre and metaxylem towards both outer & inner side mesearch D) Xylem fibre is wood fibre (E) The early formed xylem is called as

protoxylem and later formed xylem is metaxylem

A. A, B, C correct D, E, wrong

B. A, B, E correct D, C wrong

C. A, D, C, correct B, E worng

D. A,B,C,D,E correct

Answer:

69. Which of the following is true about xylem parenchyma

A. Xylem parenchyma -living and thin-walled, and their cell walls are made up of cellulose

B. They store food,in the form of starch or fat, and tannins.

C. The radial conduction of water takes place by the ray parenchymatous cells

D. all of these

Answer:

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70. Secondary xylem is formed from... during...

A. cork cambium, primary growth

B. vascular cambium, primary growth

C. interfascular cambium, primary growth

D. vascular cambium secondary grwoth

Answer:

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71. The balloon like outgrowth formed by xylem parenchyma into vessels are called as

A. Hydathodes

B. Tyloses

C. Callose

D. bast

Answer:

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72. Structures which develop from wood parenchyma block transportation of water and minerals by vessels are.

A. Hydathodes

B. Tyloses

C. Callose

D. Annula rings

Answer:

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73. Which of the following is present in both xylem and phloem

A. tracheids

B. vessels

C. sieve elements

D. fibres

Answer:

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74. Longest vessel is of:

A. Sequoia

B. Eucalyptus

C. Banyan

D. peepal

Answer:

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75. Conducting part of phloem is also named as....

A. Hadrome

B. Leptome

C. Bast fibre

D. all of these

Answer:

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76. Companion cells are seen associated with..... and controls the conduction of food

A. Sieve tube

B. Collenchyma

C. Medullary parechyma

D. Secondary cambium

Answer:

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77. A living mature cell which lacks nucleus.

A. xylem vessel

B. Sieve tubes

C. Sclerenchyma

D. Medullary ray

Answer:

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78. In mature sieve tubes a carbohydrate is responsible for closing the sieve pores. Which is termed as

A. Tyloses

B. chitin plugs

C. Sieve plugs

D. Callose plugs

Answer:

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79. The cell functionally associated with sieve tube only in angiosperm and connected by pit fields present between common longitudinal wall:

A. Phloem fibres

B. Phloem parenchyma

C. Companion cell

D. Complanion cells

Answer:

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80. The Chief conducting element in the phloem of angiosperm is

A. Sieve cells

B. Sieve tubes

C. Companion cells

D. Phloem parenchyme

Answer:

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81. Which of the following statement is true

A. Pteridophytes and gymnosperm xylem contains tracheids

B. Pteridophytes and gymnosperm phloem have sieve cells

C. In angiosperms vessesl, sieve elements, companion cells are present

D. all of these

Answer:

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82. In phloem of gymnosperms

A. albuminous cells may be present

B. They lack sieve tubes and companion cells

C. sieve cells are present

D. all of these

Answer:

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83. All of the following statements is true except

A. A mature sieve element possesses a peripheral cytoplasm and a large vacuole but lacks a nucleus

B. The functions of sieve tubes are controlled by the nucleus of companion cells.

C. sieve tube controls the functions of companion cells

D. Phloem parencyma is absent in most of the monoctyledons

Answer:

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