



# BIOLOGY

## NCERT - NCERT Biology(Telugu)

### PLANT TISSUES

**Medicine Orientated Material**

**1. Structure and function of a tissue is mainly dependent on**

- A. Its cytoplasm contents
- B. Its distribution in plant kingdom
- C. Its origin
- D. Its location in plant body

**Answer:**



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**2. Find the mismatch of the following**

- A. Guard cell – bean shaped in grasses

B. Guard cell – chlorenchymatous

C. Cuticle – protection

D. Epidermis – cells are elongated and compactly arranged

**Answer:**



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**3. Vascular cambium produces**

A. Primary and secondary xylem

B. Primary and secondary phloem

C. Primary xylem and phloem

D. Secondary xylem and phloem

**Answer:**



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**4.** In leaves, the ground tissue comprises of

A. Only Mesophyll

B. Parenchymatous tissue

C. Mesophyll, vascular bundles

D. Mesophyll, xylem parenchyma, phloem parenchyma

**Answer:**



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**5. Lateral roots originate from**

A. Endodermis

B. Cortex

C. Pericycle

D. Phloem

**Answer:**



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**6. Choose the incorrect one**

A. Ground tissue may consist of simple tissues that lie in between epidermis and vascular bundles

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

C. The vascular system consists of xylem and phloem

D. Secondary tissues are formed in monocots due to presence of cambium

**Answer:**



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7. Guard cells differ from other epidermal cells in having

A. Chloroplasts

B. Nucleus

C. Mitochondria

D. Lysosomes

**Answer:**



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8. Water storage parenchyma is found in

A. Hydrophytes

B. Mesophytes

C. Xerophytes

D. Succulents

**Answer:**



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9. All types of tissue systems have

A. Collenchymas

B. Sclerenchyma

C. Meristems

D. Parenchyma

**Answer:**



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**10.** Companion cells are usually associated with

A. Sieve tube elements

B. Vessel elements

C. Tracheids

D. Sieve cells

**Answer:**



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**11. Excessive aerenchyma is a characteristic of**

–

A. Heliophytes

B. Mesophytes

C. Xerophytes

D. Hydrophytes

**Answer:**



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**12.** In a woody dicotyledonous tree which of the following parts will mainly consist of primary tissue?

A. All parts

B. Stem and roots

C. Shoot and root tips

D. Flower, fruit and leaves

**Answer:**



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**13.** Bark refers to –

A. Phellem, phellogen, phelloderm

B. Periderm, cortex

C. Phellem, phelloderm, secondary phloem

D. Periderm, cortex, Pericycle, secondary  
phloem

**Answer:**



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**14.** The part of the leaf present between upper and lower epidermis is called as –

A. Midrib

B. Hypodermis

C. Mesophyll

D. Palisade

**Answer:**



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**15. Which is living mechanical tissue?**

A. Phloem

B. Parenchyma

C. Collenchyma

D. Sclerenchyma

**Answer:**



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**16.** Branch of science dealing with estimating the age of woody plants is –

A. Dendrochronology



B. Dendrology

C. Chronology

D. Arborichronology

**Answer:**



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**17.** Endodermis is a part of –

A. Epidermis

B. Pericycle

C. Cortex

D. Medulla

**Answer:**



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**18.** Which of the following is a anucleated living plant cell?

A. Vessel

B. Sieve tube

C. Tracheid

D. All of the above

**Answer:**



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**19.** The function of vessel is –

A. To provide mechanical strength

B. Conduction of water and minerals

C. Conduction of food only

D. All the above

**Answer:**



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**20.** Sieve tube is a part of –

A. Xylem

B. Phloem

C. Xylem and phloem

D. None of these

**Answer:**



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## Exercise

**1. Define the terms: tissue**



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**2. Define the terms: meristematic tissue**





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**3. Define the terms: dermal tissue.**



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**4. Differentiate the following: Meristematic tissue and Ground tissue.**



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5. Differentiate the following: Apical Meristem and Lateral Meristem.



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6. Differentiate the following: Parenchyma and Collenchyma.



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7. Differentiate the following: Sclerenchyma and Parenchyma.



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8. Differentiate the following: Xylem and Phloem.



[Watch Video Solution](#)



**9.** Differentiate the following: Epidermis and Bark.



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**10.** Name the following: Growing tissue, which causes growth in the length of the plant



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**11.** Name the following: Growing tissue, which causes growth in the length of the plant



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**12.** Name the following: Large air cavities in the aquatic plants.



**Watch Video Solution**

**13.** Name the following: Food material in parenchyma.



**Watch Video Solution**

**14.** Name the following: Pores essential for gaseous exchange and transpiration.



**Watch Video Solution**

**15.** Compare the following: Xylem and Phloem.



[Watch Video Solution](#)

**16.** Compare the following: Meristematic tissue and Dermal tissue.



[Watch Video Solution](#)

**17.** Justify the following: Xylem is a conductive tissue.



[Watch Video Solution](#)

**18.** Justify the following: Epidermis gives protection.



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**19.** Though Chlorenchyma, Aerenchyma and storage tissue are parenchymatous in nature, why do they have different (specific) names?



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**20.** Describe the functions of - Meristem.



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**21.** Describe the functions of - Xylem.



**Watch Video Solution**

**22.** Describe the functions of - phloem.



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**23.** "Bark cells are impervious to gases and water." What experiment will you perform to prove this?



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**24.** Draw a labelled diagram of the T.S. of the spinal cord of man.



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**25.** How can the plants perform all the life processes?



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**26.** Is there any specific arrangement of the cells in plants that help in carrying out the life processes?



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27. Define the terms: dermal tissue.



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28. Describe the types of ground tissue with well labeled diagrams.



[Watch Video Solution](#)

29. Draw a well labeled diagram of T.S. of stem.



[Watch Video Solution](#)

**30.** Draw the diagram showing different cells of xylem and phloem.



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**31.** How are the cells in meristematic tissue?



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**32.** What is the function of dermal tissue?



[Watch Video Solution](#)

**33.** What are the functions of ground tissue?



[Watch Video Solution](#)

**34.** What is the function of xylem and phloem?



[Watch Video Solution](#)

**35.** What are dermal tissues?



**Watch Video Solution**

**36. What are ground tissues?**



**Watch Video Solution**

**37. What are vascular tissues?**



**Watch Video Solution**

**38. What are meristematic tissues?**



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**39.** What are the 4 types of tissues in plants?



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**40.** Where are meristematic tissues present in plant?



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**41.** Where do cells of vascular, dermal and ground tissue arise?



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**42.** Where do you find dermal tissue in a plant?



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**43.** Where is gum secreted from gum trees?



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**44.** What is the parenchyma tissue which stores food?



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**45.** Name the scientist who coined the term 'Parenchyma'.



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**46.** What is the book written by Grew?



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**47.** What is the function of vascular tissue?



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**48.** What are the components of xylem?



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49. What are the components of phloem?



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50. Cells in groups which are similar in structure and perform similar function are

A. a. Tissue

B. b. Organ

C. c. Organ system

D. d. Root cells

**Answer:**



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**51.** Tissues that form outer coverings are called as

- A. Ground Tissue
- B. Dermal tissue
- C. Vascular tissue
- D. Meristematic tissue

**Answer:**



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**52.** Tissues that form the bulk of the plant body are called as

- A. Ground Tissue
- B. Dermal tissue
- C. Vascular tissue
- D. Meristematic tissue

**Answer:**



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**53.** Tissues that help in transport of materials

A. A. Ground Tissue

B. B. Dermal tissue

C. C. Vascular tissue

D. D. Meristematic tissue

**Answer:**



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54. Tissues that bring about overall growth and repair are called

- A. A. Ground Tissue
- B. B. Dermal tissue
- C. C. Vascular tissue
- D. D. Meristematic tissue

**Answer:**



55. Meristematic tissues at the growing tip that bring about growth in length are called

- A. A. Lateral meristematic tissue
- B. B. apical meristematic tissue
- C. C. Intercalary meristem
- D. D. Simple meristematic tissue

**Answer:**



**56.** Tissues which give rise to growth in girth of the stem

A. A. Lateral meristematic tissue

B. B. apical meristematic tissue

C. C. Intercalary meristem

D. D. Simple meristematic tissue

**Answer:**



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57. These types of tissues are found in areas where branching takes place

A. Lateral meristematic tissue

B. apical meristematic tissue

C. Intercalary meristem

D. Simple meristematic tissue

**Answer:**



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**58.** Intercalary meristematic tissue is also called

A. A. Lateral meristematic tissue

B. B. apical meristematic tissue

C. C. Intercalary meristem

D. D. Cambium

**Answer:**



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**59.** Meristematic tissues have

A. A.. Thin cell wall

B. B. No intercellular spaces

C. C. Continuously dividing cells

D. D. All of the above

**Answer:**



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**60.** Which of the following is a type of dermal tissue

A. A. Epidermis

B. B. Mesodermis

C. C. Endodermis

D. D. All of the above

**Answer:**



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**61.** Small pores that are seen in the epidermis of the leaf are called

A. A. Root hairs

B. B. Stomata

C. C. Air spaces

D. D. Vacuoles

**Answer:**



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62. Kidney shaped cells that enclose the stomata are called

A. A. Guard cells

B. B. Stomata

C. C. Air spaces

D. D. Vacuoles

**Answer:**



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**63.** Inner most layer of a cell is

- A. A. Epidermis
- B. B. Mesodermis
- C. C. Endodermis
- D. D. All of the above

**Answer:**



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**64.** In desert plants dermal tissue is

A. A. Thin waxy

B. B. Thick and waxy

C. C. Thick and long

D. D. Thin and long

**Answer:**



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**65.** Gum is secreted from the---layer of gum tree

A. Meristematic

B. Intercalary

C. Dermal

D. Vascular

**Answer:**



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**66.** In big trees the dermal tissue forms several layers above the epidermis. It is called



A. A. Invasion

B. B. Bark

C. C. Mesodermis

D. D. Trunk

**Answer:**



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**67.** Stomata and root hairs help in

A. A. Exchange of gases

B. B. Transpiration

C. C. Absorption of water

D. D. All of the above

**Answer:**



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**68.** The tissue which forms the bulk of the plant body

A. A. Meristematic tissue

B. B. Ground tissue

C. C. Vascular tissue

D. D. Dermal tissue

**Answer:**



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**69.** Parenchyma which contains chloroplasts are called

A. A. Chlorenchyma

B. B. Collenchyma

C. C. Sclerenchyma

D. D. Aerenchyma

**Answer:**



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**70.** The parenchyma which contains large air spaces are called

A. A. Chlorenchyma

B. B. Collenchyma

C. C. Sclerenchyma

D. D. Aerenchyma

**Answer:**



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**71.** Parenchyma which stores food or waste products are

A. A. Chlorenchyma

B. B. Storage tissue

C. C. Sclerenchyma

D. D. Aerenchyma

**Answer:**



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**72.** Name the scientist who coined the term 'Parenchyma'.

A. A. Nehemiah Grew

B. B. Robert Brown

C. C. Robert Hooke

D. D. Rudolf Virchow

**Answer:**



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**73.** The tissue responsible for transport of materials away from roots is

A. A. Phloem

B. B. Xylem

C. C. Aerenchyma

D. D. Dermal

**Answer:**



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**74.** The tissue responsible for transport of materials away from photosynthetic part is

A. A. Phloem



B. B. Xylem

C. C. Aerenchyma

D. D. Dermal

**Answer:**



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**75.** Xylem and Phloem are together known as

A. A. Dermal tissue

B. B. Vascular tissue

C. C. Apical tissue

D. D. Ground tissue

**Answer:**



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**76.** Tracheid cells are part of

A. A. Xylem

B. B. Phloem

C. C. Bark

D. D. Chlorenchyma

**Answer:**



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**77. Phloem cells contain**

- A. A. Sieve cells
- B. B. Sieve tubes
- C. C. Companion cells
- D. D. All of the above

**Answer:**



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**78.** Xylem cells contain

- A. A. Tracheid cells
- B. B. Tubular vessels
- C. C. Fibres
- D. D. All of the above

**Answer:**



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79. Vascular tissues carry water to a height of--  
ft in Eucalyptus

A. A. 200

B. B. 230

C. C. 330

D. D. 300

**Answer:**



80. Vascular tissues carry water to a height of--  
ft in Red wood trees

A. A. 200

B. B. 230

C. C. 330

D. D. 300

**Answer:**



81. The flexibility in plants is due to a tissue called.

- A. Parenchyma
- B. Sclerenchyma
- C. Collenchyma
- D. Aerenchyma

**Answer:**



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**82.** The cells of Bark are dead and have a chemical in their walls that makes them impervious to gases and water.

A. Suberin

B. Lignin

C. Wax

D. Cutin

**Answer:**



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**83.** The girth of the stem or root increases due to

- A. Apical meristem
- B. Lateral meristem
- C. Inter calary meristem
- D. All

**Answer:**



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84. Xylem and phloem are examples of

- A. Dermal Tissue
- B. Simple Tissue
- C. Complex Tissue
- D. Permanent Tissue

**Answer:**



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**85.** Sieve tubes and companion cells are present in

A. Xylem

B. Phloem

C. Bark

D. Cambium

**Answer:**



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**86.** Fill in the blanks:

The cells of collenchyma are.....and.....



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**87.** Fill in the blanks:

The process of taking up a permanent shape, size and a function is called.....



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**88.** Fill in the blanks:

Husk of coconut contains.....tissue.



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**89.** Fill in the blanks:

Root tips contain.....tissue.



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**Example**

1. How many types of elements together make up the xylem tissue? Name them.



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2. What are the constituents of Phloem?



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3. What are guard cells? What is their function?





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**4. What is the role of epidermis in plants?**



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**5. How does the cork act as protective tissue?**



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**6.** Name different types of meristematic tissue and draw diagram to show their location.



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**7.** Give the flow chart of Plant tissues.



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**8.** How many types of elements together make up the xylem tissue? Name them.





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**9.** What are the constituents of Phloem?



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**10.** Differentiate the following: Meristematic tissue and Ground tissue.



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**11.** Differentiate the following: Parenchyma and Collenchyma.



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**12.** Differentiate the following: Sclerenchyma and Parenchyma.



**Watch Video Solution**

**13.** Compare the following: Xylem and Phloem.



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**14.** Differentiate the following: Epidermis and Bark.



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**15.** While observing internal parts of plants, how do you feel about its structure and functions?



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**16.** What is the tissue present in the husk of coconut?



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**17.** What is the role of xylem?



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**18.** How do you observe the cell arrangement in a growing root tip. And how can you say that cutting of root tip, blocks the root growth. Explain it with a flow chart. F



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**19.** Describe the functions of Meristem, Xylem and Phloem.



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**20.** Justify the following: Xylem is a conductive tissue.



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**21.** Justify the following: Epidermis gives protection.



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**22.** Draw a well labeled diagram of T.S. of stem.





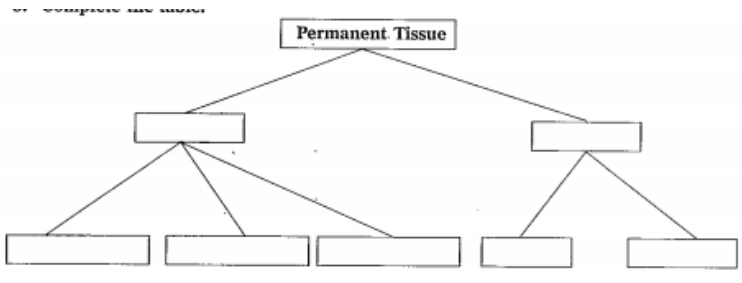
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23. Draw the picture of different kinds of meristematic tissue.



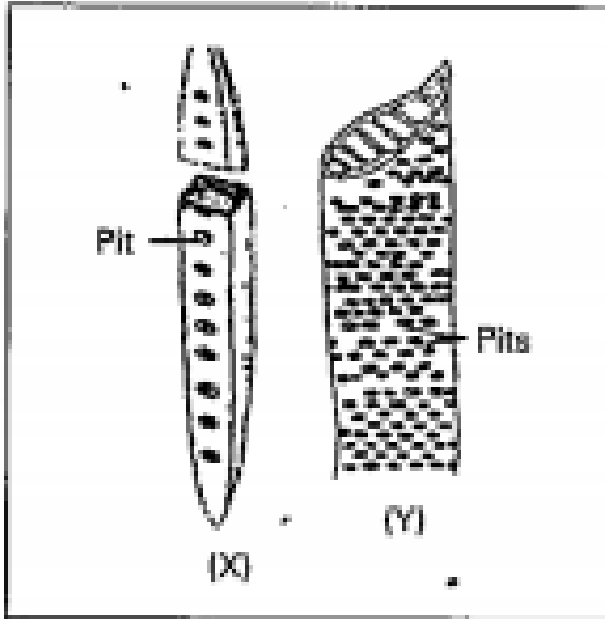
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24. Complete the table:



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25. Identify the given figures:



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**26.** Write one precaution while observing nucleus in cheek cells



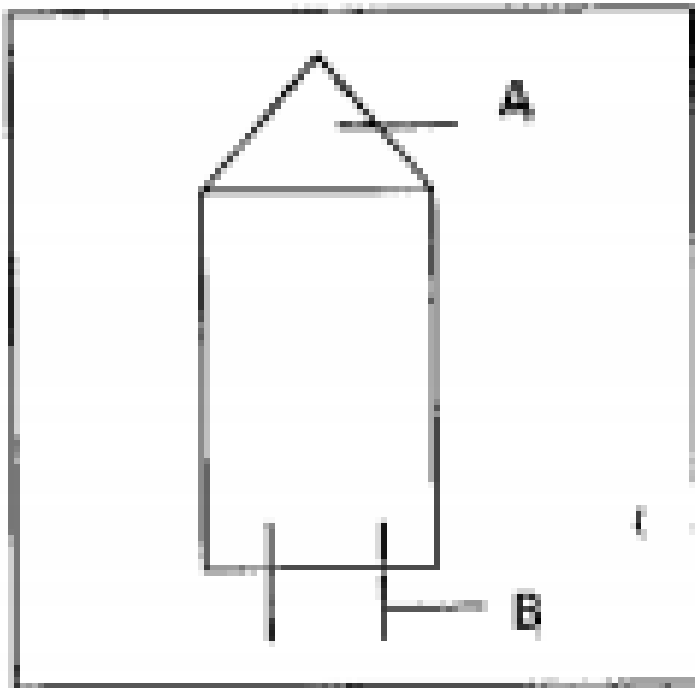
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**27.** Describe the role performed by the cell wall in plant cells



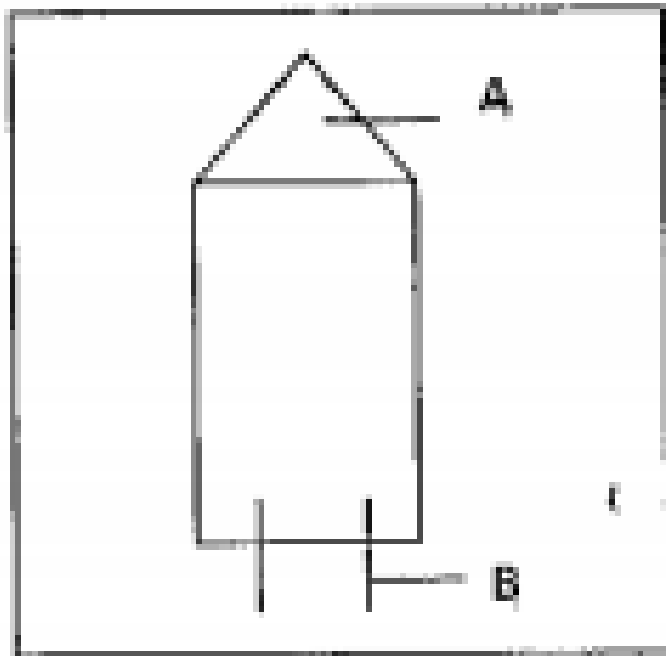
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28. In the diagram of location of meristematic tissue in plant body given below, identify the type of meristematic tissue found in the regions marked 'A' and 'B' of a stem.



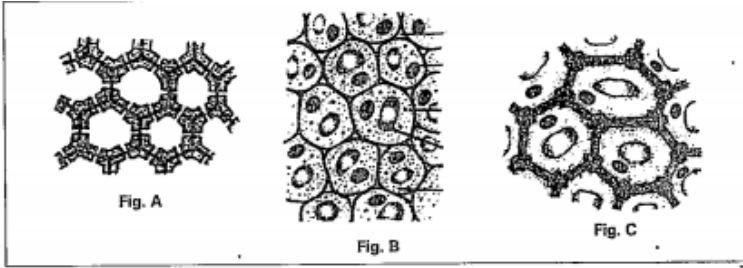
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29. State one function of each.



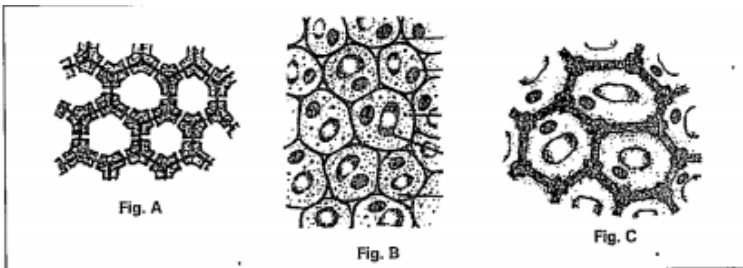
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30. Identify figures: A, B and C.



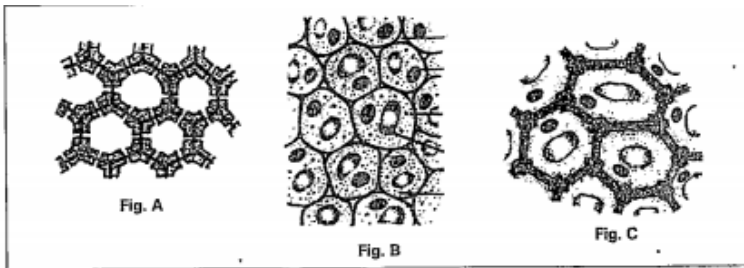
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31. Which one of them provides both mechanical strength as well as flexibility?



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32. Which one of them is commercially exploited to obtain Hemp and Jute?



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33. Which one of them can be modified to form air cavities in aquatic plants?

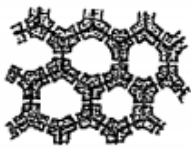


Fig. A

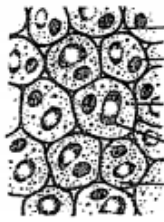


Fig. B

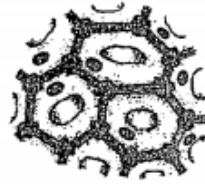


Fig. C



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34. Which one of them has heavy deposition of lignin?

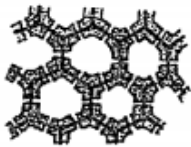


Fig. A

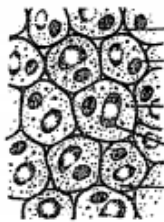


Fig. B

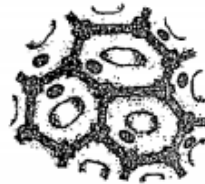


Fig. C



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**35.** Draw a neat and labelled diagram of stomata.



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**36.** write different kinds of Ground tissue.



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**37.** write various components of xylem.



**Watch Video Solution**

**38.** write components of pholem.



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**39.** Name the following: Growing tissue, which causes growth in the length of the plant



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**40.** Name the following: Growing tissue, which causes growth in the length of the plant



**Watch Video Solution**

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**42.** Name the following: Food material in parenchyma.



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**43.** Name the following: Pores essential for gaseous exchange and transpiration.



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**44.** Though Chlorenchyma, Aerenchyma and storage tissue are parenchymatous in nature, why do they have different (specific) names?



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**45.** Compare the following: Xylem and Phloem.



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**46.** Compare the following: Meristematic tissue and Dermal tissue.



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**47.** "Bark cells are impervious to gases and water." What experiment will you perform to prove this?



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**48.** If you want to know more about tissues in plants, what questions are you going to ask?



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**49.** Collect the information about dermal tissues of plants, in what may they help to them.



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**50.** Define the terms:

Tissue.



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**51.** Define the terms:

apical Meristematic tissue.



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**52.** Define the terms:

bark .



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**53.** which type of tissue makes up the husk of  
coconut



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**54.** differentiation



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55. the study of tissues?



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56. which region of plants are meristamatic tissue ?



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1. Define the terms

-Tissue

-Meristematic tissue



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2. Differentiate the following: Meristematic tissue and Ground tissue.



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### 3. Name the following

-Growing tissue, which causes growth in the length of the plant.

-Growing tissue, which causes growth in the girth of the plant.

-Large air cavities in the aquatic plants.

-Food material in pharenchyma.

-Pores essential for gaseous exchange and transpiration.



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4. what are vessels ?



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5. Justify the following

-Xylem is a conductive tissue

-Epidermis gives protection



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6. write the arrangement of cells



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**7. - Meristem, Xylem and phloem functions**



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**8. simple tissue and complex tissue**



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**9. "where do you find meristem in root tip**



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**10.** Collect the information about dermal tissues of plants, in what may they help to them.



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**11.** Draw a well labeled diagram of T.S. of stem.



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**12.** While observing internal parts of plants, how do you feel about its structure and functions?



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**13.** Define the terms A) Tissue B) Meristematic tissue C) Dermal tissue.



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**24.** where do find intercalary meristems in the shoot tip ?



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