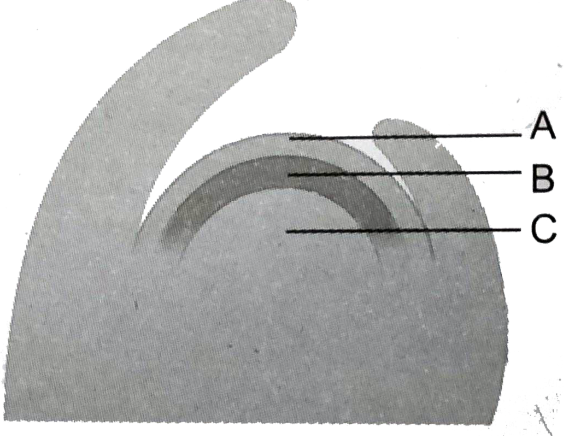
# BIOLOGY

# BOOKS - SARAS PUBLICATION

# TISSUE AND TISSUE SYSTEM

## Exercise

**1.** Refer to the given figure and select the correct statement.




(i) A, B, and C are histogen of shoot apex.

(ii) A Gives rise to medullary rays.

(iii) B Gives rise to cortex.

(iv) C Gives rise to epidermis.

A. I and ii only

B. ii and iii only

C. I and iii only

D. iii and iv ony

**Answer:**

Watch Video Solution

**2.** Read the following sentences and identify the correctly mathced sentences.

In exarch condition, the protoxylem lies oustide of metxylem. II. In endarch condition, the protoxylem lies towards the centre. III. In centrarch condition, metaxylem lies in the

middle of the protoxylem. IV. In mesarch condition, protoxylem lies in the middle of the metaxylem.

A. I and ii and iii only

B. ii, iii and iv ony.

C. I, ii and iv only

D. All of these.

**Answer:**

Watch Video Solution

**3.** In Gymnosperms, the activity of sieve tubes are controlled by

A. Nearby sieve tube members.

B. Phloem parenchyma cells.

C. Nucleus of companion cells

D. Nucleus of albuminous cells.

**Answer:**

 Watch Video Solution

**4.** When a leaf trace extends from a vascular bundle in a dicot stem, what would be the arrangement of vascular tissues in the veins of the leaf?

A. Xylem would'be on top and the phloem on the bottom.

B. Phloem would be on top and the xylem on the bottom.

C. Xylem would encircle the phloem

D. Phloem would encircle the xylem.

**Answer:**

Watch Video Solution

**5.** Grafting is successful in dicots but not in monocots because the dicots have

A. Vascular bundles arranged in aring.

B. Cambium for secondary growth

C. Vessels with elements arranged end to end.

D. Cork cambium

**Answer:**

Watch Video Solution

**6.** Why the cells of sclerenchyma and tracheids become dead?

Watch Video Solution

**7.** Distinguish the anatomy of dicot root from monocot root.

Watch Video Solution

**8.** Distinguish the anatomy of dicot stem from monocot stem.

Watch Video Solution

**9.** Explain Sclereides with their types?

Watch Video Solution

**10.** What are sieve tubes ? Explain.

Watch Video Solution

**11.** Collenchyma is characterized by the presence of

A. Polygonal cells yvith deposits of cellulose and pectinall over the wall.

B. Isodiametric cells with deposits of cellulose and pectin at the corners.

C. Elongated cells with thickening at the corners.

D. Isodiametric cells with thickening all over the wall.

**Answer:**

**12.** What are the main functions of lateral meristem?

A. Pith

B. Cambium

C. Xylem

D. Corlex

**Answer:**

Watch Video Solution

**13.** The region in apical meristem develps into

A. Endodermis

B. Pericyle

C. Epidermis

D. Vascular tissue

**Answer:**

Watch Video Solution

**14.** Hydathodes are component of

A. Vascular tissue system

B. Ground tissue system

C. Epidermal tissue system.

D. Cortex tissue system

**Answer:**

Watch Video Solution

**15.** Which of the following is a living structure?

A. Sclerenchyma

B. Parenchyma

C. Xylem vessel

D. Tracheid

**Answer:**

 Watch Video Solution

**16.** In collenchyma, the thickening of corners is made up of

A. Pectin

B. Lignin

C. Suberin

D. Resin

**Answer:**

Watch Video Solution

**17.** Sclereids are also known as

A. Accessory cells

B. Companion cells

C. Stone cells

D. Guard cells

**Answer:**

Watch Video Solution

**18.** Which one is the simple tissue.

A. Tracheids

B. Phloem tissues

C. Collenchyma

D. Xylem tissues

**Answer:**

Watch Video Solution

**19.** Type of cambium located between pholem and xylem is classified as

A. Shoot cambium

B. Root cambium

C. Vascular cambium

D. Cork cambium

**Answer:**

Watch Video Solution

**20.** Collenchyma occurs in the stem and petioles of

A. Xerophytes

B. Monocots

C. Dicots

D. Hydrophytes

**Answer:**

Watch Video Solution

**21.** Who proposed Tunica corpus theory?

A. Hanstein

B. Shcmidt

C. Popham

D. Sanio

**Answer:**

Watch Video Solution

**22.** Pericycle of roots produces

A. Mehcnical support

B. Lateral roots

C. Vascular bundles

D. Adventitious buds

**Answer:**

Watch Video Solution

**23.** What is true about a monocot leaf

A. Reticulate venation

B. Absence of bulliform cells from epidermis

C. Mesophyll not differentiated into palisade and spongy tissues.

D. Well differentiated mesophhyll.

**Answer:**

Watch Video Solution

**24.** Where do the Casparian bands occur

A. Epidermis

B. Endodermis

C. Pericycle

D. Phloem

**Answer:**

Watch Video Solution

**25.** Angular collenchyma occurs in

A. Datura

B. Helianthus

C. Althaea

D. Salvia.

**Answer:**

Watch Video Solution

**26.** Which of the following are non-nucleated cells?

A. Palisade cell

B. Cortical cell

C. Sieve tubes

D. Companion cell

**Answer:**

Watch Video Solution

**27.** Vessels are found in

A. All angiosperms and some gymnosperms

B. Most of angiosperms and few gymnosperms.

C. All angiosperms, all gymnosperms and some pteridophytes.

D. All pteriodophytes.

**Answer:**

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**28.** Radial arrangement of vascular tissues are found in

A. Monocot root

B. Dicot root

C. Monocot stem

D. Dicot stem

**Answer:**

 Watch Video Solution

**29.** Which of the following statement is true.

A. Trachea have narrow lumen.

B. Tracheids have narrow lumen

C. Vessels have narrow lumen

D. Tracheids have wide humen

**Answer:**

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**30.** Transpiration and exchange fo gases are function of

A. Stomata

B. Xylem

C. Both (a) and (b)

D. Phloem

**Answer:**

Watch Video Solution

**31.** A group of cells alike in form, function and origin are called

A. Tissue

B. Organ

C. organelle

D. None of these

**Answer:**

Watch Video Solution

**32.** Plant length is increased by

A. Apical meristems

B. lateral meristems

C. periblem

D. Parenchyma

**Answer:**

 Watch Video Solution

**33.** Collenchyma mainly forms

A. Hypodermis

B. Epidermis

C. Phloem

D. Inner cortex

**Answer:**

 Watch Video Solution

**34.** Phloem in the plants perform the function of

A. conduction of food

B. Conduction of water

C. Providding support

D. Photosynthesis.

**Answer:**

Watch Video Solution

**35.** The number of passage cells are equivalent to the number of

A. Phoem cells

B. Protoxylem cells

C. Metaxylem cells

D. Xylem cells

**Answer:**

Watch Video Solution

**36.** Pith and cortex do not differentiate in

A. Monocot root

B. Monocot stem

C. Dicot stem

D. Monocot leaf

**Answer:**

 Watch Video Solution

**37.** In monocot leaves, the mesophyll consists of

A. Aerenchyma

B. Only spongy chlorenchyma

C. Only palisade

D. Palisade and spongy chlorenchyma.

**Answer:**

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**38.** In monocote stem the vascular bundles are

A. Arranged in a ring

B. Arranged alternatively

C. Present inside endodermis

D. Scattered in ground tissue.

**Answer:**

Watch Video Solution

**39.** Exarch condition of Xylem is found only in

A. Leaf

B. Root

C. Flower

D. Stem

**Answer:**


**40.** Bulliform cells are found in the leaves of

A. Sunflower

B. Nerium

C. Maize

D. Lotus

**Answer:**

Watch Video Solution

**41.** Casparian strips are found on the

A. Walls of pericyle cells

B. Walls of endodermal cells

C. Walls of epidermal cells

D. Walls of bundle sheath cells

**Answer:**

Watch Video Solution

**42.** Which tissue provides elasticity to the growing parts of the plant

A. Collenchyma

B. Aerenchyma

C. Parenchyma

D. Sclerenchyma.

**Answer:**

Watch Video Solution

**43.** The dead element of the phloem is

A. Sieve cells

B. Companion cells

C. Sieve tubes

D. Phloem fibre

**Answer:**

Watch Video Solution

**44.** Root hair always

A. Cuticularized

B. Very long

C. Multicellular

D. Unicellular

**Answer:**

Watch Video Solution

**45.** Closed type of vascular bundle lacks

A. Xylem

B. Sclerenchyma

C. Phloem

D. Cambium

**Answer:**

Watch Video Solution

**46.** The lateral meristem increses the

A. height of the plant

B. Thickness of trunk

C. Size of the leaf

D. Branches of root

**Answer:**

Watch Video Solution

**47.** Conjoint, collateral and open vascular bundles are found in

A. Monocot stem

B. Monocot leaf

C. Dicot stem

D. Dicot stem

**Answer:**

Watch Video Solution

**48.** Passage cells are found in

A. Endodermis

B. Pericyle

C. Hypodermis

D. Epidermis

**Answer:**

 Watch Video Solution

**49.** Pericycle is formed of

A. Collenchyma

B. Parenchyma

C. Chlorencyma

D. Conjuctive tissue

**Answer:**

Watch Video Solution

**50.** Companion cells are

A. Living and non- nucleated

B. Dead and non-nucleated

C. Dead but nucleated

D. Living and nucleated

**Answer:**

**51.** In maize stem, the vascular bundles are

A. Arranged in a ring

B. Scattered - irregularly

C. Arranged in two rings

D. Scattered but smaller towards periphery.

**Answer:**

Watch Video Solution

**52.** The ends of trahceids are

A. Tapering

B. Flat

C. Perforated

D. Wall less

**Answer:**

Watch Video Solution

**53.** The region of stele begins with

A. Cortex

B. Parenchyma

C. Endodermis

D. Pericycle

**Answer:**

Watch Video Solution

**54.** When cambium is present, the vascular bundle is called

A. Close

B. Radial

C. Open

D. Conjoint

**Answer:**

Watch Video Solution

**55.** Match the following

| | |
|---|---|
| 1. Maize stem | - Conjoint and closed |
| 2. Sunflower stem | - Radial |
| 3. Maize root | - Conjoint and open. |

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**56.** Match the following

| | |
|---|---|
| 1. Parenchyma | - Elongated and narrow |
| 2. Collenchyma | - Elongated and tubular |
| 3. Sclerenchyma | - Star shaped |
| 4. Phloem sieve tubes | - Polygonal |
| 5. Companion cells | - Isodiametric |

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**57.** In Gymnosperms, the activity of sieve tubes are controlled by

A. Nearby sieve tube members

B. Phloem parenchyma cells

C. Nucleus of companion cells

D. Nucleus of albuminous cells

**Answer:**

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**58.** Grafting is successful in dicots but not in monocots because the dicots have

A. Vascular bundles arranged in a ring

B. Cambium for secondary growth

C. Vessels with elements arranged end to end

D. Cork cambium

**Answer:**

**59.** Hydathodes are component of

A. Vascular tissue system

B. Ground tissue system

C. Epidermal tissue system

D. Cortex tissue system

**Answer:**

Watch Video Solution

**60.** Pith and cortex do not differentiate in

A. Monocot root

B. Monocot stem

C. Dicot stem

D. Monocot leaf

**Answer:**

**61.** Read the following sentences and identify the correctly mathced sentences.

In exarch condition, the protoxylem lies oustide of metxylem. II. In endarch condition, the protoxylem lies towards the centre. III. In centrarch condition, metaxylem lies in the middle of the protoxylem. IV. In mesarch condition, protoxylem lies in the middle of the metaxylem.

A. i, ii and iii only

B. ii, iii and iv only

C. i, ii and iv only

D. All of these

**Answer:**

Watch Video Solution

**62.** Why the cells of sclerenchyma and tracheids become dead?

Watch Video Solution

**63.** List the types of sclereids

Watch Video Solution

**64.** Which parenchyma is called as stellate parenchyma? Give examples.

Watch Video Solution

**65.** Define eustele.

Watch Video Solution

**66.** What is Hypodermis

Watch Video Solution

**67.** Write the functions of protederm.

Watch Video Solution

**68.** Distinguish the anatomy of dicot stem from monocot stem.

Watch Video Solution

**69.** What are sieve tubes ? Explain.

Watch Video Solution

**70.** Describe macrosclereids.

Watch Video Solution

**71.** Draw a diagram to show position of different types of meristems.

Watch Video Solution

**72.** Write notes on bulliform cells.

Watch Video Solution

**73.** What are idioblasts?

Watch Video Solution

**74.** Distinguish the anatomy of dicot root from monocot root.

Watch Video Solution

**75.** Which part of an angiosperm plant has protostele? Describe the anatomy of this part in a dicot plant.

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## Example

**1.** Define Plant Anatomy.

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**2.** What is the other name of xylem and phloem?

 Watch Video Solution

**3.** Define Histology.

Watch Video Solution

**4.** What are the two main types of tissues found in plants?

Watch Video Solution

**5.** How is meristematic tissue classified on the basis of position?

Watch Video Solution

**6.** Define apical meristem

Watch Video Solution

**7.** Where is intercalary meristem found? Give example.

Watch Video Solution

**8.** What are the main functions of lateral meristem?

Watch Video Solution

**9.** What is meant by aerenchyma?

Watch Video Solution

**10.** Which parenchyma is called as stellate parenchyma? Give examples.

Watch Video Solution

**11.** Define Exarch.

Watch Video Solution

**12.** Define- Endarch.

Watch Video Solution

**13.** Define Centrach.

Watch Video Solution

**14.** Write the types of cells in xylem.

Watch Video Solution

**15.** Name the different types of secondary wall thickening found in tracheids.

Watch Video Solution

**16.** What is meant by xylem fibres?

Watch Video Solution

**17.** What is axil parenchyma?

Watch Video Solution

**18.** Write short notes on protopholem.

Watch Video Solution

**19.** What is metaphloem?

 Watch Video Solution

**20.** What is meant by callose plug?

 Watch Video Solution

**21.** Define stele.

 Watch Video Solution

**22.** What is cutin?

Watch Video Solution

**23.** Write the types of tissue system.

Watch Video Solution

**24.** Define tissue system.

Watch Video Solution

**25.** What are silica cells?

Watch Video Solution

**26.** What is starch sheath?

Watch Video Solution

**27.** What is halophytes?

Watch Video Solution

**28.** What are idioblasts?

Watch Video Solution

**29.** What is syncyte? Give an example.

Watch Video Solution

**30.** Define eustele.

Watch Video Solution

**31.** What is " bundle cap " or " hard bast"?

Watch Video Solution

**32.** Write the names of soft fibres.

Watch Video Solution

**33.** Name the types of fibres.

Watch Video Solution

**34.** What are the main functions of parenchyma tissues?

Watch Video Solution

**35.** Write the functions of ground tissue system.

Watch Video Solution

**36.** Describe the functions of vascular tissue system.

Watch Video Solution

**37.** Which components are present in epidermal tissue system?

Watch Video Solution

**38.** Define stomata.

Watch Video Solution

**39.** What are guard cells?

Watch Video Solution

**40.** What are amphicribral vascular bundles?

Watch Video Solution

**41.** What are amphivasal vasculra bundles?

Watch Video Solution

**42.** What is collateral vascular bundle?

Watch Video Solution

**43.** Describe bicollatareal vascular bundles.

Watch Video Solution

**44.** Give an account on piliferous layer.

Watch Video Solution

**45.** Write the functions of protederm.

Watch Video Solution

**46.** Name the types of meristem based on plane of division.

Watch Video Solution

**47.** Define passage cells

Watch Video Solution

**48.** In which group of plants the guard cells are dumb - bell shaped?

Watch Video Solution

**49.** What is intrastelar ground tissue?

Watch Video Solution

**50.** What is Hypodermis

Watch Video Solution

**51.** Define vascular bundles.

Watch Video Solution

**52.** Write the function of passage cells in plants.

Watch Video Solution

**53.** Write notes on bulliform cells.

Watch Video Solution

**54.** Write short notes on trichomes.

Watch Video Solution

**55.** Write short notes on wood fibres.

Watch Video Solution

**56.** Explain Bast fibres?

Watch Video Solution

**57.** Write a short note on Phloem parenchyma.

Watch Video Solution

**58.** Write the functions of epidermal tissue system.

Watch Video Solution

**59.** What are Casparian strips?

Watch Video Solution

**60.** Explain types of vascular bundles.

Watch Video Solution

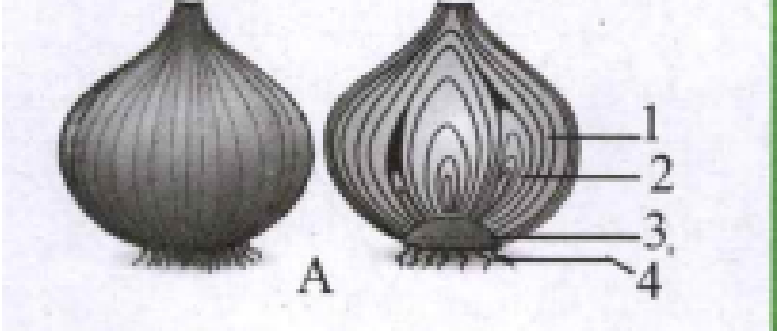
**61.** List out the types fo trichomes?

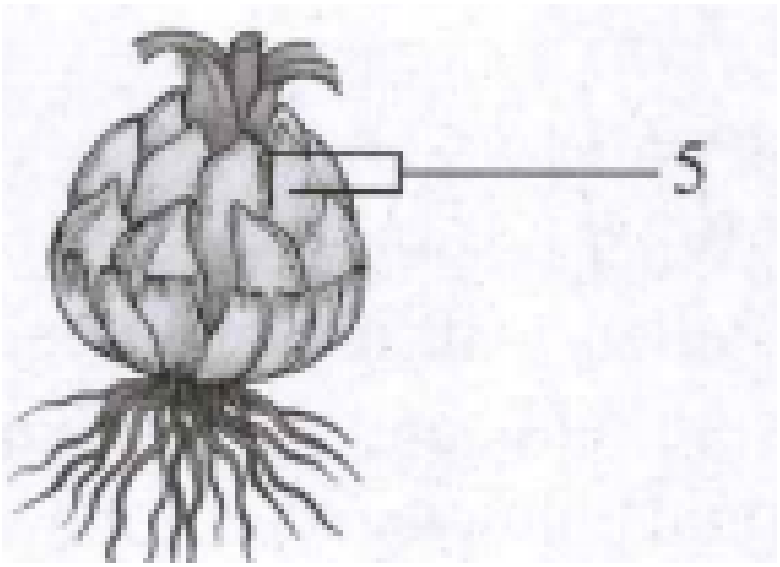
Watch Video Solution

**62.** Write notes on strasburger cells?

Watch Video Solution

**63.** Identify the given diagrams A and B and label the parts 1 to 5.

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**64.** Write short notes on prickles.

Watch Video Solution

**65.** Define Pith.

Watch Video Solution

**66.** Write short notes on pericycle.

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**67.** Main steps related to variety development are given below. But one step is missing.


a. Identify the missing step.

b. What is the significance of the step in variety development?

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**68.** Draw a diagram to show position of different types of meristems.

Watch Video Solution

**69.** Enumerate the characters of meristematic tissue.

Watch Video Solution

**70.** Distinguish the apical meristem from lateral meristem.

Watch Video Solution

**71.** Write short note on mesophyll of dicot leaf.

Watch Video Solution

**72.** Explain the economic importance of fibres in our daily life.

Watch Video Solution

**73.** Write short notes on tunica corpus theory.

Watch Video Solution

**74.** What is Quiescent centre? Add a note its importance.

Watch Video Solution

**75.** Describe Korper - Kappe theory.

Watch Video Solution

**76.** Write short notes on fibres?

Watch Video Solution

**77.** Explain the types of wood fibres.

Watch Video Solution

**78.** What are parenchyma cells?

Watch Video Solution

**79.** Explain the types of vascular bundles.

Watch Video Solution

**80.** Which part of an angiosperm plant has protostele? Describe the anatomy of this part in a dicot plant.

Watch Video Solution

**81.** Can mangrove trees grow in salt water? Explain.

Watch Video Solution

**82.** Which leaf has no differentiation in mesophyll cells? Explain the anatomy of this monocot leaf.

Watch Video Solution

**83.** Which type of leaf has bean-shaped guard cells? Describe the anatomy of such leaf.

Watch Video Solution

**84.** Which type of stem has a scattered arrangement of vascular bundles.?

Watch Video Solution

**85.** Explain the primary structure of monocot root.

Watch Video Solution

**86.** Explain the anatomy which type of a stem has medullary rays.

Watch Video Solution

**87.** Describe the histogen theory.

Watch Video Solution

**88.** Explain the apical cell theory of root apical meristem.

Watch Video Solution