



# **BIOLOGY**

**BOOKS - VIKRAM PUBLICATION ( ANDHRA PUBLICATION)**

**HISTOLOGY AND ANATOMY OF FLOWERING PLANTS**

**Very Short Answer Type Questions**

1. The transverse section of a plant material shows the following anatomical features, (a) the vascular bundles are conjoint, scattered and surrounded by clerenchymatous undulate sheaths (b) phloem parenchyma is absent.

What will you identify it as?



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2. Why are xylem and phloem called complex tissues?





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



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**4.** Protoxylem is the first formed - xylem .If the protoxylem lies rodially next to pholem what kind of arrangement of xylem would you call it ? Where do you find it ?



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5. What is the function of pholem paranchyma ?



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6. The phytohormones which helps in the prevention of loss of water is



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7. Which part of the plant would show the following ? (a) Radial vascular bundle (b) Polyarch xylem (c) Well developed pith (d) Exarch xylem



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8. What are the cells that make the leaves curl in plants during water stress ? Give an example .



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**9. Vascular cambium produces**



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**10. Give one basic functional difference between phellogen and phelloderm .**



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**11.** If one debarks a tree , what parts of the plant are removed ?



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## Short Answer Type Questions

**1.** State the location and function of different types of meristem.



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2. 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 dicot stem? Give reasons.



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



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4. A transverse section of the trunk of a tree shows concentric rings which are known as annual rings . How are things rings formed ?  
What is the significance of these rings ?



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5. What is the difference between lenticels and stomata ?



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6. Write the precise function of

(a) Sieve tube (b) Interfascicular cambium (c )

Collenchyma (d ) Sclerenchyma .



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7. The shape of guard cells of Poaceae members is



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8. Point out the difference in the anatomy of leaf of peepal (Ficus religiosa ) and Maize (Zea mays ) . Draw the diagram and label the differences .



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



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



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## Long Answer Type Questions

**1.** Explain the process of secondary growth in stems of woody angiosperm with help of schematic diagrams. What is the significance?



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



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



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**4. Simple tissues is/are**



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**5. Complex tissues are**



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



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



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**8. Distinguish between the following**

Exarch and endarch condition or protoxylem.



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**9. Distinguish between the following**

Stele and vascular bundle .



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**10.** Distinguish between the following

Protoxylem and metaxylem .



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**11.** Interfascicular cambium and cork cambium

are



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**12.** What do you mean by closed vascular bundles



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**13.** Distinguish between the following  
Stem hair and root hair .



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**14.** Distinguish between the following

Heart wood and sap wood .



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**15.** Distinguish between the following

Spring wood and Autumn wood .



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



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**17.** Describe the T.S of a dicot stem .



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**18.** Describe the T.S of a Monocot stem .



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**19.** Describe the internal structure of a Dicot Root .



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**20.** Describe the internal structures of a Monocot Root .



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1. Name the various kinds of cell layers which constitute the bark .



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



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3. Assume that you have removed the duramen part of a tree. Will the tree survive or die ?



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## Important Questions

1. Why are xylem and phloem called complex tissues?



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2. What is the function of pholem paranchyma ?



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3. What are the cells that make the leaves curl in palnts during water stress ? Give an example .



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



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5. 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 dicot stem? Give reasons.



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