



## BIOLOGY

# BOOKS - CHETANA BIOLOGY (MARATHI ENGLISH)

## Plant Tissue and Anatomy

### Example

1. Concentric vascular bundles are always closed. Describe.



[Watch Video Solution](#)

2. How is arrangement of Vascular Bundle in dicot and monocot stem?



[Watch Video Solution](#)

3. How is structure of vascular bundles of the root?



[Watch Video Solution](#)

4. Why vascular bundles of dicot stem are described as conjoint, collateral and open?



**Watch Video Solution**

5. Which component brings about important processes in the living organisms?



**Watch Video Solution**

6. What is the tissue?





[Watch Video Solution](#)

7. Define Meristem.



[Watch Video Solution](#)

8. What are the different criteria for the classification of meristem?



[Watch Video Solution](#)

**9.** What are the functions of meristems?



**Watch Video Solution**

**10.** What is a meristematic tissue? What are its characteristics?



**Watch Video Solution**

**11.** Explain the classification of meristems on the basis of origin and development.



[Watch Video Solution](#)

**12.** What are the different types of meristems based on functions?



[Watch Video Solution](#)

**13.** Classify meristems on the basis of their position in plant body and describe the different types.



[Watch Video Solution](#)

**14.** What is Permanent Tissue? What are its types?



**Watch Video Solution**

**15.** What are simple permanent tissues?



**Watch Video Solution**

**16.** Describe sclerenchyma fibre.





[Watch Video Solution](#)

**17.** Write short note on peculiarity of a sclerenchymatous cell wall.



[Watch Video Solution](#)

**18.** What are Plant Tissues? Mention types.



[Watch Video Solution](#)



**19.** Write a note on complex permanent tissue.



**Watch Video Solution**

**20.** Describe parenchyma.



**Watch Video Solution**

**21.** Write a note on parenchyma.



**Watch Video Solution**

**22.** Write functions of parenchyma cells.



**Watch Video Solution**

**23.** Describe Collenchyma.



**Watch Video Solution**

**24.** Describe the living tissue that gives flexible mechanical strength.



**Watch Video Solution**

**25. Describe Collenchyma.**



**Watch Video Solution**

**26. Sketch and label collenchyma.**



**Watch Video Solution**

**27. Write a note on Sclerenchyma and describe its types and functions.**



**Watch Video Solution**

**28.** Describe the structure of Xylem.



**Watch Video Solution**

**29.** Give a brief account of water conducting tissues of higher plants.



**Watch Video Solution**

**30.** Sketch and label xylem



**Watch Video Solution**

**31.** Describe different types of thickening in xylem tracheids.



**Watch Video Solution**

**32.** Describe the structure of Phloem.



**Watch Video Solution**

**33.** Explain phloem and its types in detail.



**Watch Video Solution**

**34.** What is tissue system?



**Watch Video Solution**

**35.** Mention types of tissue system.



**Watch Video Solution**

**36.** Give chief functions of guard cells.



**Watch Video Solution**

**37.** State the criteria for classifying plant tissue.



**Watch Video Solution**

**38.** Define Meristem.



**Watch Video Solution**

**39.** What is Permanent Tissue? What are its types?



**Watch Video Solution**

**40.** Explain the term 'Trichome'.



**Watch Video Solution**



**41.** What is the shape of guard cells generally in Dicot and Monocot?



**Watch Video Solution**

**42.** Which type of vascular bundles shows presence of cambium on both sides of xylem? Mention example.



**Watch Video Solution**

**43.** Which component brings about important processes in the living organisms?



**Watch Video Solution**

**44.** Describe the structure of stomata.



**Watch Video Solution**

**45.** Describe various types of vascular bundles.



**Watch Video Solution**

**46.** Define Intrafascicular cambium.



**Watch Video Solution**

**47.** Define Interfascicular cambium.



**Watch Video Solution**

**48.** Describe secondary growth in dicot root.



**Watch Video Solution**

**49.** Write short note on secondary growth



**Watch Video Solution**

**50.** Explain the terms 'Tyloses'.



**Watch Video Solution**

**51.** What is extractives?



**Watch Video Solution**

**52.** Explain the term: Periderm



**Watch Video Solution**

**53.** Explain the terms: Sap wood



**Watch Video Solution**

**54.** Explain the terms: Heart wood



**Watch Video Solution**

**55.** Write a note on secondary xylem.



**Watch Video Solution**

**56.** What is annual ring? How is it formed?



**Watch Video Solution**

**57.** What is anomalous secondary growth?



**Watch Video Solution**

**58.** Give characteristics of cork.



**Watch Video Solution**

**59.** What is phellogen?



**Watch Video Solution**

**60.** What is periderm?



**Watch Video Solution**

**61.** What are lenticels?



**Watch Video Solution**

**62.** Explain the term: Cambium



**Watch Video Solution**

**63.** Explain the term: Open type of vascular bundle





[Watch Video Solution](#)

**64.** Explain the term: Closed type of vascular bundle



[Watch Video Solution](#)

**65.** Explain the term: Exarch



[Watch Video Solution](#)

**66.** Explain the term: Endarch



**Watch Video Solution**

**67.** Answer in one sentence. What is polyarch condition?



**Watch Video Solution**

**68.** Why vascular bundles of dicot stem are described as conjoint, collateral and open?



[Watch Video Solution](#)

**69.** How is arrangement of Vascular Bundle in dicot and monocot stem?



[Watch Video Solution](#)

**70.** Concentric vascular bundles are always closed. Describe.



[Watch Video Solution](#)

**71.** How is structure of vascular bundles of the root?



**Watch Video Solution**

**72.** Answer in one sentence. What is hard bast?



**Watch Video Solution**

**73.** Answer in one sentence. What is dorsiventral leaf?





[Watch Video Solution](#)

**74.** With the help of a neat labelled diagram, describe the T.S. of a monocot root.



[Watch Video Solution](#)

**75.** With the help of a neat labelled diagram, describe the anatomy of a dicot root.



[Watch Video Solution](#)

**76.** Describe the T.S. of dicot stem.



**Watch Video Solution**

**77.** With the help of a neat labelled diagram, describe the T.S. of a monocot root.



**Watch Video Solution**

**78.** With the help of a neat labelled diagram, describe T.S. of dicot stem (sunflower).



**Watch Video Solution**

**79.** With the help of a neat labelled diagram, describe T.S. of dicot stem (sunflower).



**Watch Video Solution**

**80.** With the help of a neat labelled diagram, describe the structure of monocot stem.



**Watch Video Solution**

**81.** With the help of a neat labelled diagram, describe the internal structure of dorsiventral leaf. Draw neat labelled diagram: T.S. of Dicot leaf.



**Watch Video Solution**

**82.** With the help of a neat labelled diagram, describe the anatomy of isobilateral or monocot leaf.



**Watch Video Solution**



**83.** Sketch and Label OR Draw neat labelled diagrams. Meristematic tissue.



**Watch Video Solution**

**84.** Sketch and Label OR Draw neat labelled diagrams. Parenchyma tissue.



**Watch Video Solution**

**85.** Sketch and Label OR Draw neat labelled diagrams. Types of thickening in xylem vessels.



**Watch Video Solution**

**86.** Sketch and label xylem



**Watch Video Solution**

**87.** Sketch and Label OR Draw neat labelled diagrams. T.S. of Phloem (Leptome).



[Watch Video Solution](#)

**88.** Sketch and Label OR Draw neat labelled diagrams. Dicot Stomata.



[Watch Video Solution](#)

**89.** Distinguish between Fibres and Sclerids.



[Watch Video Solution](#)

**90.** Distinguish between Meristematic Tissue and Parenchymatous Tissue.



**Watch Video Solution**

**91.** Distinguish between Xylem and Phloem.



**Watch Video Solution**

**92.** Distinguish between anatomy of Dicot and Monocot roots.



[Watch Video Solution](#)

**93.** Write the difference between Tracheids and Vessels.



[Watch Video Solution](#)

**94.** Write the difference between Intrafascicular and Interfascicular cambium.



[Watch Video Solution](#)

**95.** Write the difference between Heartwood and Sapwood.



**Watch Video Solution**

**96.** Write the difference between Spring wood/early wood and Autumn wood/late wood.



**Watch Video Solution**

**97.** Write down differences between anatomy of stem and root.



**Watch Video Solution**

**98.** With the help of a well-labelled diagram explain the different between a dicot and a monocot leaf.



**Watch Video Solution**

**99.** Distinguish between Dicot and Monocot leaf on the basis of following characters, Mesophyll cells



**Watch Video Solution**

**100.** Differentiate between Vascular Bundle of Monocot and Vascular Bundle of Dicot.



**Watch Video Solution**



**101.** Differentiate between Xylem functioning and Phloem functioning.



**Watch Video Solution**

**102.** Differentiate between monocots and dicots.

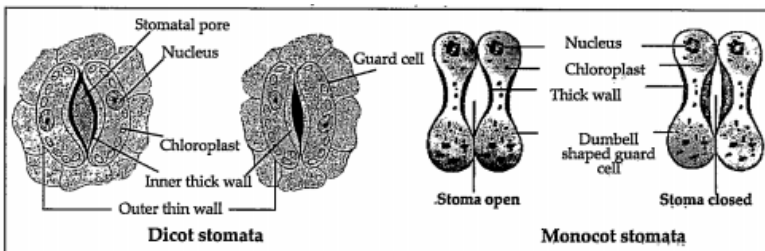


**Watch Video Solution**

**103.** How is arrangement of Vascular Bundle in dicot and monocot stem?

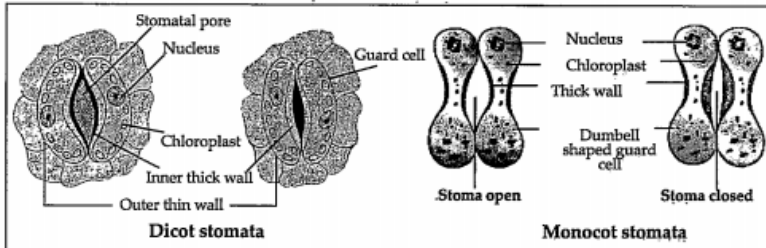
 [Watch Video Solution](#)

**104.** Write the information related to diagrams given below.



 [Watch Video Solution](#)

**105.** Write the information related to diagrams given below.



**Watch Video Solution**

**106.** A fresh section was taken by a student but he was very disappointed because there were only few green and most colourless cells. Teacher provided a pink colour solution. The

section was immersed in this solution and when observed it was much clearer. What is the magic?



[Watch Video Solution](#)

**107.** While observing a section many scattered vascular bundles could be seen. Teacher said but in spite of this large number the stem cannot grow in girth. Why?



[Watch Video Solution](#)

**108.** A section of the stem had vascular bundles, where tissue was wrapped around the other. How will you technically describe it?



**Watch Video Solution**

**109.** There were two cut logs of wood lying in the campus. One had growth rings and other didn't. Teacher said it is due to differences in their pattern of growth which is dependent on season. How?



**Watch Video Solution**

**110.** While on the trip to Kashmir, Pintoo observed that cut portions of large trees shows distinct rings, which he never found in Maharashtra. Why is so?



**Watch Video Solution**

**111.** A student was observing a slide with no label under microscope. The section had some vascular bundles scattered in the ground

tissue. It is section of a monocot stem! He exclaimed. No! It is section of fern rachis, said the teacher. Teacher told to observe vascular bundle again. Student agreed. Why?



[Watch Video Solution](#)

**112.** Student found a wooden stopper in lab. He was told by an old lab attendant that it is there for many years. He kept thinking how it did not rot?



[Watch Video Solution](#)

**113.** Student while observing a slide of leaf section observed many stomata on the upper surface. He thought he has placed slide upside down. Teacher confirmed it is rightly placed. Explain.



**Watch Video Solution**

**Exercise**



1. Location or position of meristematic regions is divided into.....types.

A. one

B. two

C. three

D. none of the above

**Answer:**



**Watch Video Solution**

2. Cambium is also called..... .

- A. apical meristem
- B. intercalary meristem
- C. lateral meristem
- D. none of the above

**Answer:**



**Watch Video Solution**

3. Collenchyma is a type of.....tissue.

A. living

B. dead

C. living and dead

D. none of the above

**Answer:**



**Watch Video Solution**

4. ....is a complex permanent tissue.

A. Parenchyma

B. Sclerenchyma

C. Chlorenchyma

D. Xylem

**Answer:**



**Watch Video Solution**

5. Mesophyll tissue is present in..... .

A. root

B. stem

C. leaf

D. flower

**Answer:**



**Watch Video Solution**

6. Which of the following tissues in with dead, thick walled cells without intercellular spaces?

A. Parenchyma

B. Collenchyma

C. Sclerenchyma

D. Phloem

**Answer:**



**Watch Video Solution**

7. Xylem and Phloem are described as..... .

A. meristematic tissues

B. storage tissues

C. simple permanent tissues

D. complex permanent tissues

**Answer:**



**Watch Video Solution**

**8.** Fibres associated with phloem are called as..... .

A. intraxillary

B. sclerenchyma fibre

C. bast fibres

D. cortical fibres

**Answer:**



**Watch Video Solution**

**9. Meristematic cells contain..... .**

A. thin cell wall

B. dense cytoplasm

C. large nuclei

D. all of these



**Answer:**



**Watch Video Solution**

**10.** The function of cell division is restricted to..... .

- A. meristematic tissue
- B. permanent tissue
- C. secretory tissue
- D. all of these

**Answer:**



**Watch Video Solution**

**11.** Collenchyma differs from sclerenchyma  
in..... .

A. retaining proptoplasm

B. having thick walls

C. having inside lumen

D. being dead

**Answer:**



**Watch Video Solution**

**12.** The characteristic feature of water storage tissue is..... .

- A. large sized cells
- B. thin cell walls
- C. presence of nucleus
- D. presence of vacuoles

**Answer:**



**Watch Video Solution**

**13. Parenchyma has..... .**

A. intercellular spaces and uniform thickening

B. deposition on comers

C. deposition at angles

D. deposition in forms of bands

**Answer:**



**Watch Video Solution**

**14.** Which tissue is composed of dead cells impervious to gases and water?

- A. Collenchyma
- B. Parenchyma
- C. Periderm
- D. Lateral meristem

**Answer:**



**Watch Video Solution**

**15.** Which plants lack phloem parenchyma cells?

A. All dicots

B. Monocots with secondary growth

C. most of monocot

D. Both a and b

**Answer:**



**Watch Video Solution**

**16.** Hypodermis is sclerenchymatous in..... .

A. monocot stem

B. dicot stem

C. Both A and B

D. monocot root

**Answer:**



[Watch Video Solution](#)

17. Meristematic cells contain..... .

- A. distinct nucleus
- B. thin cell wall
- C. dense protoplasm
- D. all three

**Answer:**



[Watch Video Solution](#)



18. Dumbbell shaped stomata seen in.....leaf.

A. Sunflower

B. Maize

C. Gnetum

D. Selaginella

**Answer:**



**Watch Video Solution**

19. ....is outermost protective layer of plant tissue system made up of compactly arranged cells.

A. Hypodermis

B. Epidermis

C. Endodermis

D. Cortex

**Answer:**



**Watch Video Solution**

20. Define Intrafascicular cambium.



[Watch Video Solution](#)

21. Write short note on peculiarity of a sclerenchymatous cell wall.



[Watch Video Solution](#)

22. In which section of plant you will get radial type of vascular bundle.



[Watch Video Solution](#)

**23.** Write note on characteristics of meristematic tissue.



[Watch Video Solution](#)

**24.** Write the difference between Spring wood/early wood and Autumn wood/late wood.



[Watch Video Solution](#)

**25.** Distinguish between anatomy of Dicot and Monocot roots.



**Watch Video Solution**

**26.** write components of phloem and add a note on its function.



**Watch Video Solution**

27. Describe various types of vascular bundles.



[Watch Video Solution](#)

28. Distinguish between Dicot and Monocot leaf on the basis of following characters,  
Mesophyll cells



[Watch Video Solution](#)

29. Describe the structure of stomata.



[Watch Video Solution](#)

**30.** Describe the T.S. of dicot stem.



[Watch Video Solution](#)

**31.** Give a brief account of water conducting tissues of higher plants.



[Watch Video Solution](#)