

Write the answers on your own paper, not on this sheet.

1. Define the following terms:

- a. Botany
- b. Perennial plants
- c. Annual plants
- d. Biennial plants
- e. Vegetative organs
- f. Reproductive plant organs
- g. Undifferentiated cells
- h. Xylem
- i. Phloem
- j. Deciduous plant

2. List the four basic kinds of plant tissue.

3. What is the most common tissue in a plant?

4. What is the difference between petioles and stipules?

5. What's the difference between simple leaves and compound leaves?

6. Name the type of leaf mosaic in each picture.



a.



b.

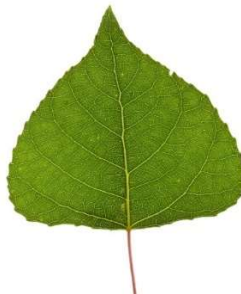


c.

7. For each leaf, list the shape, margin, and venation.



a.



b.



c.

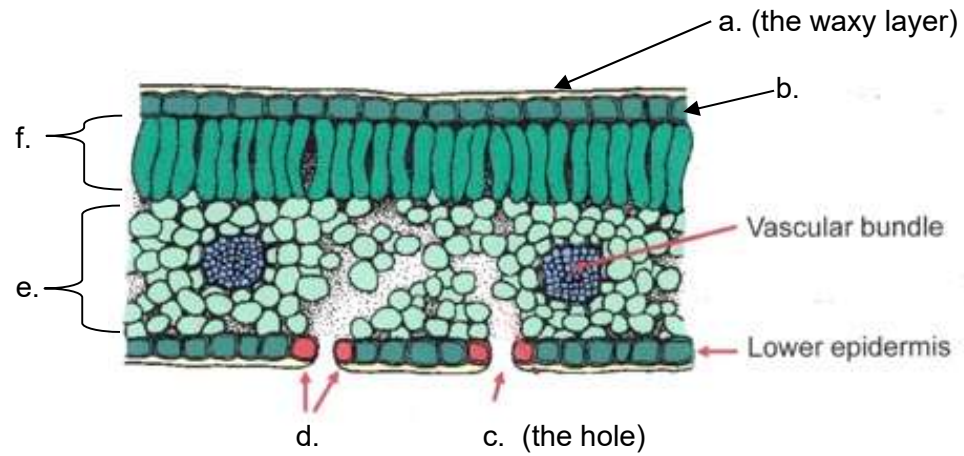


d.



e.

8. Label the cross-section of a leaf.



9. What process occurs in the palisade and spongy mesophyll?

10. What is the collenchyma?

11. What controls the opening and closing of the stomata on a leaf?

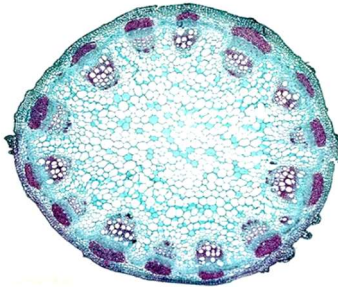
12. Why is the top of a leaf typically darker than the bottom?

13. Name three different leaf pigments.

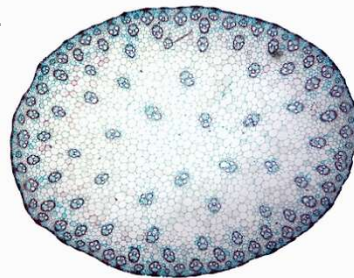
14. What happens inside the tree in the fall that causes the leaves to fall off?

1. Define the following terms
 - a. Pith
 - b. Girdling
 - c. Rhizoid
 - d. Alternation of generations
 - e. Dominant generation
 - f. Pollen
 - g. Cotyledon
2. Explain the difference between a fibrous root system and a taproot system.
3. What is the function of each region of a root:
 - a. Root cap
 - b. Meristematic region
 - c. Elongation region
 - d. Maturation region
4. Why do roots have root hairs?
5. In a root, are the xylem and phloem located around the outer layer of the root or in the center of the root?
6. Indicate whether the stem cross-section comes from a monocot or a dicot:

a.



b.



7. What allows woody stems to have no limits to their growth, unlike herbaceous stems?
8. What is the function of the vascular cambium?
9. What type of vascular tissue (xylem or phloem) makes up most of the wood in a woody stem?
10. Even though they are underground, bulbs and tubers are not roots.
 - a. What type of vegetative organ is a bulb?
 - b. What type of vegetative organ is a tuber?
11. Why can't bryophytes grow very tall?
12. Ferns do not produce seeds. How do they reproduce?
13. What is the difference between phylum Coniferophyta and phylum Anthophyta?