

Sample Anatomy Quiz

url = <http://botit.botany.wisc.edu/sample-quiz>

1. What Tissue system is indicated by the red X's? **Ground tissue system**
2. What Tissue system is indicated by the yellow X's? **Vascular tissue system**
3. What Tissue system is indicated by the black arrows? **Dermal tissue system**
4. What is the indicated structures **Trichomes**
5. What is the tissue **Collenchyma**
6. What is the tissue **phloem**
7. What is the tissue **xylem**
8. What is the tissue **phloem**
9. What is the tissue **xylem**
How are these incomplete secondary walls adaptive? **They prevent the vessel from collapsing but allow for elongation**
10. What type of cell is this? **Companion cell**
11. What is the tissue **Collenchyma**
12. What type of cell is this? **Stone cell**
13. What type of cell is this? **fiber**
14. What is at the tip? **Root cap**
What are the projections? **Root hairs**
15. These cells make up **Apical meristem of the root**
16. What tissue is at the very center? **Xylem**
- 17a. What is the tissue **Phloem**
- 17b. These cells make up the **Endodermis**
- 17c. These cells make up the **Pericycle**
- 17d. What are these areas of the cell wall? **Casparian strips**
- 17e. What is the cell type? **Vessel Element**
- 17f. What is the cell type? **Sieve tube element**
- 17g. In what way may water follow these paths through the cells with the red walls? **Only via plasmodesmata**

18. What tissue is at the very center? **Procambium - immature xylem**
- 19a. In what way may water follow these paths? **Across the membranes of the endodermal cells and via plasmodesmata**
- 19b. Primary xylem differentiated from the inside out or from the **outside in**
20. What tissue layer gives rise to lateral roots? **Pericycle**
- 21a. Which of the three primary meristematic tissues is indicated by the arrows? **Procambium**
- 21b. What is the region of ground meristem? **Leaf gap**
22. What is the region of ground tissue inside of the vascular bundles? **Pith**
23. What is the region of ground tissue outside of the vascular bundles? **Cortex**
24. What is the tissue **Xylem**
25. What is this layer of dividing cells? **Vascular cambium**
- 26a. What is this opening? **A stoma**
- 26b. What is the tissue **Phloem**
- 26c. What is the tissue **Parenchyma**
- 27a. What are these cells? **Sieve tube elements**
- 27b. What are these cells? **Companion cells**
28. This is a section through **A eudicot stem** **A eudicot root** **A monocot stem**
- 29a. What is this structure? **Vascular bundle**
- 29b. What is this tissue? **Phloem**
- 29c. What is this tissue? **Xylem**
- 29d. What are these cells? **Vessel elements**
- 29e. What are these cells? **Companion cells**
- 30a. What is the tissue system? **Ground tissue system**
- 30b. What is the tissue type? **Parenchyma**

- 30c. What is the cell type? **Basal cells of the epidermis**
- 30d. What is the cell type? **Guard cells**
31. Give an example how this leaf is modified for life in a dry environment.
See you notes in the lab manual.
32. What is this waxy layer? **Cuticle**
33. What are the structures? **Stomata**
34. Give an examples of how this leaf is modified for life in a wet environment.
See you notes in the lab manual.
35. What is this opening? **Stomata**
36. What is the tissue? **Phloem**
37. What is the tissue? **Xylem**
38. All these cells formed at what location of the shoot? **Apical meristem of the shoot**
39. What is this newly formed layer of dividing cells? **Cork cambium**
40. Excluding the pith and some primary xylem bordering the pith, all these cells formed at what meristem? **Vascular cambium**
- 41a. What is this layer of dividing cells? **Cork cambium**
- 41b. What are these cells? **Cork cells**
- 41c. What is this tissue layer? **Epidermis**
42. What is this tissue? **Phloem**
43. What is this structure of the periderm? **Lenticel**
44. What is the function? **Gas exchange**
45. In which direction is the pith? **up**
- 46a. What is this structure? **Dialated phloem ray**
- 46b. What is this structure? **Xylem ray**
- 47a. What is this cell layer? **Vascular cambium**
- 47b. From left to right what are each of these cell types?
Fiber Sieve tube element Companion cell
48. The population of cells in the vascular cambium that are not horizontally oriented go on to produce what structure in both the xylem and phloem?
Rays

49. Everything down to what tissue layer is sloughed off with the onset of secondary growth?

Endodermis

50. What tissue is in the very center?

Xylem (Primary)

51. What tissue is in the very center?

Xylem (Primary)

52. What is this tissue of carrot?

Phloem

53. What is the cell type of carrot?

Vessel element