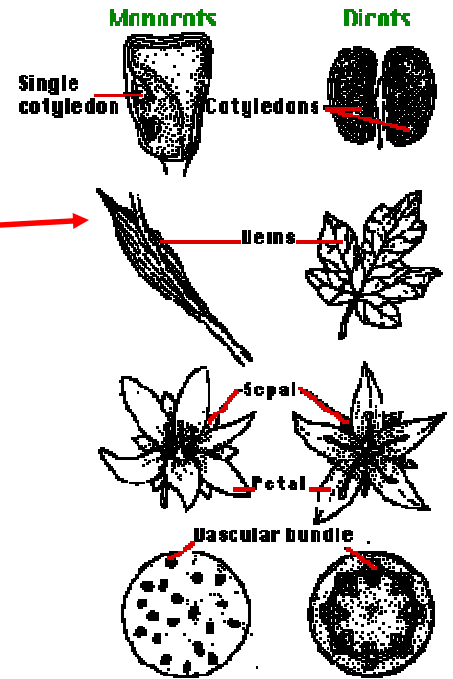
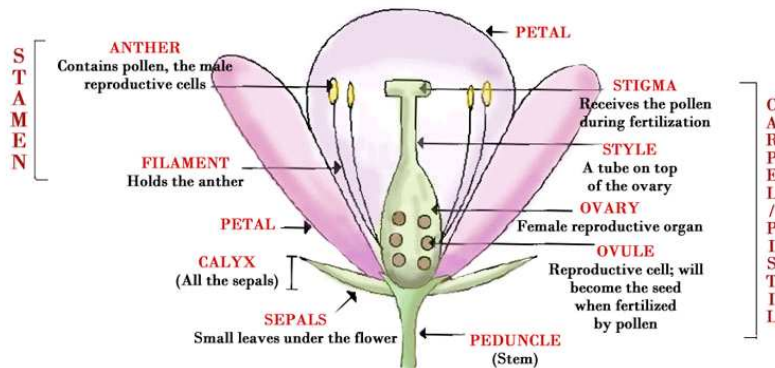


## Plant Test Review Ch. 22-25

1. A thin ring in a tree trunk might indicate
  - a. A period of drought
2. After fertilization in angiosperms, what does the ovule develop
  - a. seeds
3. Angiosperms produce seeds inside what structures?
  - a. ovule
4. Characteristics of the Plant kingdom
  - a. Multicellular
  - b. Eukaryotes
  - c. Contain cell walls
5. Give an example of a rapid response in plants.
  - a. Venus fly trap capturing it's prey
6. How do minerals move from the soil into roots?
  - a. Active transport, therefore ATP is required
7. How do plants use hormones?
  - a. Allow plants to respond or adjust to changing environmental conditions
8. How do plants use the energy of sunlight?
  - a. To produce glucose through process of photosynthesis
9. How do sugars move through a plant?
  - a. Pressure-flow hypothesis
10. How would a seed face less competition?
  - a. If dispersed away from the parent plant
11. Identify monocot and dicot stem cross sections (pictures)
12. Identify plant phylums by pictures and common characteristics
13. Know the life cycle of an angiosperm
  - 1<sup>st</sup> Pollen grain and ovule are produced through meiosis
  - 2<sup>nd</sup> pollen lands on the stigma,
  - 3<sup>rd</sup> pollen tube develops in the style
  - 4<sup>th</sup> the ovules are fertilized
  - 5<sup>th</sup> fruit develops from the ovary, which contains the seeds
  - 6<sup>th</sup> seed germinates into adult plant and life cycle is complete
14. Know the parts and functions of a flower



### Anatomy of a Flower



15. Plant adaptations (cactus, for example)
  - a. Leaf structure reduces water loss
  - b. Shallow fibrous root system to increase surface area for increased water absorption
16. Starting from the root cap, what is the correct sequence of cell activity in a root?
  - a. Cell division (Mitosis), cell elongation, and cell differentiation
17. The first plants evolved from???
  - a. Multicellular green algae, aka Chlorophyta
18. What are stolons?
  - a. Horizontal stems
19. What are the characteristics of a dicot? Of a monocot?
  - a. See question 11
20. What are the different types of vascular tissue?
  - a. Xylem and phloem
21. What are the main functions of stems?
  - a. Transport nutrients and water between roots and leaves
22. What do auxin and ethylene influence?
  - a. The of shedding of leaves
23. What do plants need to survive?
  - a. Adequate gas exchange through stomata, CO<sub>2</sub> is required to generate glucose, which is transported to mitochondria for ATP production
24. What do stomata do?
  - a. Exchange O<sub>2</sub> and CO<sub>2</sub> with the atmosphere
25. What does phytochrome control?
  - a. Controls the photoperiodism of plants
26. What does the xylem consist of in angiosperms?
  - a. Vessel elements
27. What is a carrot?
  - a. taproot
28. What is a fruit?
  - a. A ripened ovary containing seeds
29. What is a gibberlin?
  - a. A plant hormone that effects the growth and development of fruits
30. What is a rhizoid?
  - a. Has a similar function and role as plant roots, anchor plant, collects water and nutrients
31. What is a seed?
  - a. A plant structure containing: embryo, food source and a protective covering
32. What is adhesion?
  - a. Attraction between a water molecule and other substance
33. What is an antheridium?
  - a. Male reproductive part of Ferns that produce sperm
34. What is dormancy?
  - a. A period of decreased activity
35. What is germination?
  - a. Early growth stage of a plant embryo
36. What is gravitropism?
  - a. Response from a plant toward gravity
  - b. Ensures roots grow into soil
37. What is meristematic tissue?

- a. Region of plant the produces new cells
38. What is phototropism?
- a. Response from a plant toward light
39. What is primary growth (in stems)?
- a. Elongation...increasing in length
40. What is the endodermis?
- a. Layer of cells enclosing vascular tissue
41. What is the function of roots?
- a. Anchor and support the plant
42. What is the outer covering of plants?
- a. Dermal tissue
43. What is unique about tumbleweeds?
- a. Unique mode of seed dispersal, where entire plant aids in delivery system
44. What is xylem?
- a. A vascular tissue that conducts water great distances allowing plants to increase in size
45. What kind of animal would ensure the widest dispersal of a plant's seeds?
- a. Birds and/or fruit eating bats
46. What kind of seeds are generally dispersed by animals?
- a. Seeds with stickers
47. What part of a plant would be best to observe cell reproduction?
- a. Root tips b/c the apical meristem is actively dividing through Mitosis
48. What traps pollen grains on coniferous plants?
- a. Sticky secretion on the scales of a cone
49. What type of plant lives the longest?
- a. Perennial plants
50. What would a pollen grain landing near an ovule produce?
- a. After fertilization it develops into a seed
51. What would a pollen tube of a gymnosperm contain?
- a. 2 haploid sperm nuclei
52. What would stoma look like?
- a. Opening between two bean shaped cells
53. What would you find in the meristem regions of plants?
- a. Active cell division can be seen at the tips of roots and shoots of a plant
54. When plants evolved to live on land, what had to happen?
- a. Conservation of water
55. Where are gametophytes of gymnosperms found?
- a. cone
56. Where are pollen grains produced in angiosperms?
- a. anther
57. Where are spores produced in ferns?
- a. sori
58. Where does reproduction occur in angiosperms?
- a. ovary
59. What do Bryophytes need to reproduce?
- a. water