Chapters 22,23: Botany Intro I

Format: 25 multiple choice questions; 10 Q leaf vocab matching; 10 Q monocot or dicot or both matching; Nitrogen cycle fill in the blank graphic; one essay

Vocab

Leaf complexity	dendrology	stomata
simple/compound	monocot	cuticle
Venation pattern	dicot	nitrogen-fixing bacteria
parallel	Angiosperm	denitrifying bacteria
pinnate	Gymnosperm	vector
palmate	herbaceous stem	legumes
margin	woody stem	crown/ canopy (of a tree)
blade	taproot	deciduous tree
petiole	fibrous root	evergreen tree
Margin type	primary/secondary roots	midrib/central vain
entire/smooth	cotyledon	vascular bundle
toothed	phloem	
lobed	xylem	

Things you MUST know:

1. Functions of flowers.
2. How to distinguish leaf complexity from a picture.
3. How to discern leaf margin types from a picture.
4. Remember what autotrophic and heterotrophic means and apply this (again) to kingdoms.
5. How to distinguish between monocots and dicots.
6. Which group of plants is most fundamental to man's survival? Why?
7. How to distinguish between taproots and fibrous roots.
8. Vascular tissue transport (substance & direction)
    a. *Xylem* carries **water & nutrients** primarily in an **upward** direction.
    b. *Phloem* carries **sugars** throughout (mostly **downward**) the plant.

9. Which plant parts do humans consume? To answer, think of an example and write it next to my list:
    a. Stem
    b. Root
    c. Leaf
    d. Fruit
    e. Seed

    ANSWER?
10. Design Feature Scenarios: be able to identify main features God had in mind when plants face these natural circumstances

CIRCUMSTANCE	DESIGN FEATURE
a. Days dry, nights humid	stomata would do what?
b. Days humid, nights dry	stomata would do what?
c. Predatory herbivore	Branches equipped how?
d. High winds	Plants would be?

11. Functions of a leaf's cuticle.
12. Know various seed vectors as well as pollinating vectors. (Be sure to keep these distinct from one another).
13. Why do the flowers disappear from a plant?
14. Be familiar with the nitrogen cycle enough to match function with agent (organism performing function).
15. What are the functions of a seed coat for the embryonic plant?

Essays

There are two--you need only to select 1.

a. Nitrogen Cycle: Write the cycle and its steps in paragraph form. Include major forms of N and organisms involved at each stage.
b. In sentence form, share three parts of a tree and various characteristics of each part which help in tree identification.