

NAME: _____

Answer as concisely as possible. Grading is on a 100 point scale with 105 total points possible.

1. *Translate the following words used in plant taxonomic names into English (1 point each, 10 points total)*

lenta:

stellata:

ovata:

florida:

pungens:

decidua:

tomentosa:

glauca:

microphylla:

laurifolia:

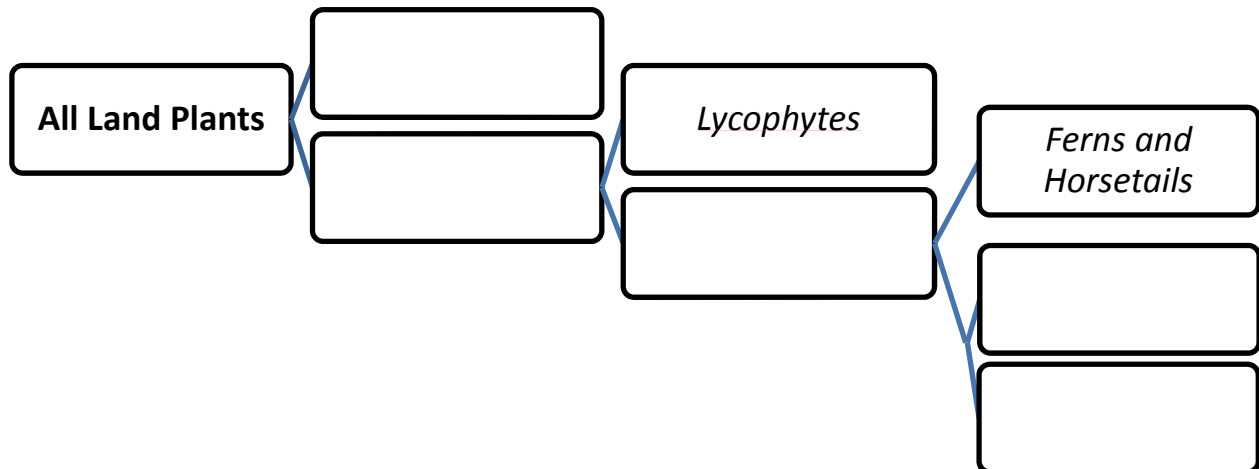
2. *The first lecture this semester focused on what we study in dendrology. **List and briefly explain** five topics we discussed that are important to learn in dendrology. (2 points each, 10 points total)*

Points: _____

6. Complete the table below with one of the choices from the column heading. (1/2 point per box, 10 points total)

List fruit type in this column	Is it compound or simple?	Is it dry or fleshy?	Is it dehiscent, indehiscent, or neither?	How many lines of suture does it have? (none may be correct)	List an example of a species with this type of fruit.
					American sycamore
samara					
					black cherry, sugarberry
			dehiscent		

7. Fill in the empty boxes on this phylogenetic tree showing how plants evolved. (5 points)



Points: _____

8. Define the following abbreviations. (1 point each, 5 points total)

spp.

ssp.

var.

sp.

x (when found between the genus and specific epithet):

9. Using Kleb's concept ($P = G + E + G \times E$), explain the following differences you observe. (3 points each, 9 points total)

black oak has big shade leaves and small sun leaves

a peppervine leaf is completely white

loblolly pine grows faster than slash pine when more fertilizer is used

10. Compare and contrast speciation variation and clinal variation. (4 points)

11. Key out **slash pine** on the key provided below. Circle your choice for EACH STEP to the right. Species names have been replaced on this key with letters A – P. (8 points)

1. Needle-like leaves.....	2
1. Broad leaves.....	5
2. Needles > 8 inches in length, cones > 6 inches in length.....	A
2. Needles ≤ 8 inches in length, cones ≤ 6 inches in length.....	3
3. Needles < 4 inches in length, cones < 4 inches in length.....	B
3. Needles ≥ 4 inches in length, cones ≥ 4 inches in length.....	4
4. Cones chestnut brown, umbo large but blunt.....	C
4. Cones light brown to grey, umbo small but pointed.....	D
5. Leave opposite.....	6
5. Leaves alternate.....	11
6. Leaves simple.....	7
6. Leaves compound.....	10
7. Leaves lobed.....	8
7. Leaves unlobed.....	9
8. Margins serrated, terminal bud rounded.....	E
8. Margins entire, terminal bud pointed.....	F
9. Leaves < 1.5 inches in length, apex rounded.....	G
9. Leaves > 1.5 inches in length, apex acuminate.....	H
10. Leaf scar curves around lateral buds.....	I
10. Leaf scar shield to oval shaped, found below lateral buds.....	J
11. Leaves lobed.....	12
11. Leaves unlobed.....	14
12. Leaves bristle tipped.....	13
12. Leaves lacking bristle tips.....	K
13. Leaves rounded at base, curved mid-rib, lobing often asymmetrical.....	L
13. Leaves straight at base, straight mid-rib, lobing often symmetrical.....	M
14. Leaves spatula-shaped or three-lobed.....	N
14. Leaves linear or narrow and elliptical, no lobing usually.....	15
15. Leaves deciduous, papery and thin, margin entire.....	O
15. Leaves evergreen, thick and waxy, margin revolute.....	P

12. Key out **willow oak** on the key provided below. Circle your choice for EACH STEP to the right. Species names have been replaced on this key with letters A – P. (10 points)

1. Needle-like leaves.....	2
1. Broad leaves.....	5
2. Needles > 8 inches in length, cones > 6 inches in length.....	A
2. Needles ≤ 8 inches in length, cones ≤ 6 inches in length.....	3
3. Needles < 4 inches in length, cones < 4 inches in length.....	B
3. Needles ≥ 4 inches in length, cones ≥ 4 inches in length.....	4
4. Cones chestnut brown, umbo large but blunt.....	C
4. Cones light brown to grey, umbo small but pointed.....	D
5. Leave opposite.....	6
5. Leaves alternate.....	11

Points: _____

6. Leaves simple.....	7
6. Leaves compound.....	10
7. Leaves lobed.....	8
7. Leaves unlobed.....	9
8. Margins serrated, terminal bud rounded.....	E
8. Margins entire, terminal bud pointed.....	F
9. Leaves < 1.5 inches in length, apex rounded.....	G
9. Leaves > 1.5 inches in length, apex acuminate.....	H
10. Leaf scar curves around lateral buds.....	I
10. Leaf scar shield to oval shaped, found below lateral buds.....	J
11. Leaves lobed.....	12
11. Leaves unlobed.....	14
12. Leaves bristle tipped.....	13
12. Leaves lacking bristle tips.....	K
13. Leaves rounded at base, curved mid-rib, lobing often asymmetrical.....	L
13. Leaves straight at base, straight mid-rib, lobing often symmetrical.....	M
14. Leaves spatula-shaped or three-lobed.....	N
14. Leaves linear or narrow and elliptical, no lobing usually.....	15
15. Leaves deciduous, papery and thin, margin entire.....	O
15. Leaves evergreen, thick and waxy, margin revolute.....	P

13. Key out **green ash** on the key provided below. Circle your choice for EACH STEP to the right. Species names have been replaced on this key with letters A – P. (8 points)

1. Needle-like leaves.....	2
1. Broad leaves.....	5
2. Needles > 8 inches in length, cones > 6 inches in length.....	A
2. Needles ≤ 8 inches in length, cones ≤ 6 inches in length.....	3
3. Needles < 4 inches in length, cones < 4 inches in length.....	B
3. Needles ≥ 4 inches in length, cones ≥ 4 inches in length.....	4
4. Cones chestnut brown, umbo large but blunt.....	C
4. Cones light brown to grey, umbo small but pointed.....	D
5. Leave opposite.....	6
5. Leaves alternate.....	11
6. Leaves simple.....	7
6. Leaves compound.....	10
7. Leaves lobed.....	8
7. Leaves unlobed.....	9
8. Margins serrated, terminal bud rounded.....	E
8. Margins entire, terminal bud pointed.....	F
9. Leaves < 1.5 inches in length, apex rounded.....	G
9. Leaves > 1.5 inches in length, apex acuminate.....	H
10. Leaf scar curves around lateral buds.....	I
10. Leaf scar shield to oval shaped, found below lateral buds.....	J
11. Leaves lobed.....	12
11. Leaves unlobed.....	14
12. Leaves bristle tipped.....	13
12. Leaves lacking bristle tips.....	K

Points: _____

- 13. Leaves rounded at base, curved mid-rib, lobing often asymmetrical.....L
- 13. Leaves straight at base, straight mid-rib, lobing often symmetrical.....M
 - 14. Leaves spatula-shaped or three-lobed.....N
 - 14. Leaves linear or narrow and elliptical, no lobing usually.....15
- 15. Leaves deciduous, papery and thin, margin entire.....O
- 15. Leaves evergreen, thick and waxy, margin revolute.....P

14. Create a key for the following species. (7 points)

Black walnut shagbark hickory bald cypress eastern redcedar Shumard oak