

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, 5 points total)*

silicicola:

rubens:

cordiformis:

parviflora:

pomifera:

2. *Define the following terms. (1 points each, 3 points total)*

Dendrology:

Tree:

Liana:

3. *We discussed three types of primary growth. Identify the type of primary growth from the following descriptions. Each type of growth may be described multiple times. (1 point each, 5 points total)*

A zig-zag twig on an elm:

A straight twig on a maple:

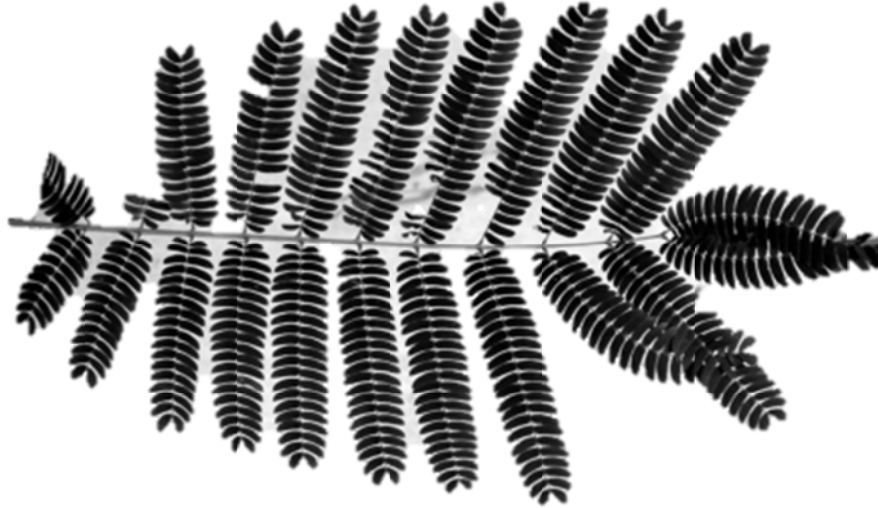
A large silver terminal bud on a longleaf pine midsummer:

The end of a twig was killed by frost, dying back to the last lateral bud:

You can determine the age of a young tree by counting the number of flushes:

Points: _____

4. Label the photo below with at least 5 different parts of a compound leaf, using correct terminology. Only leaf features will earn you any credit. (1 point each, 5 points total)



5. Fill in the following table describing our classification scheme for fruits. (1/2 point each, 8 points total).

Complexity	Compound Type	Dry / Fleshy	Term describing if dry fruit split	Name of Fruit Type	Example of Species with this Fruit Type	
Compound	Multiple	Not applicable (N/A)	N/A	N/A		
	Aggregate					
Simple	N/A				Sycamore	
					Acer spp.	
					Oaks	
				Capsule		
		Fabaceae				
	N/A			N/A		Hawthorn
					Drupe	
					Persimmon	
					Trifoliate orange	

Points: _____

6. Draw a leaf or portion thereof that illustrates each of the following terms related to leaf morphology. Identify the part of the leaf to which the term applies. (2 points each, 10 points total)

DELTATE

Part of Leaf:

CUSPIDATE

Part of Leaf:

AURICULATE

Part of Leaf:

CRENATE

Part of Leaf:

INCISED

Part of Leaf:

Points: _____

7. *You find a flower and see that it is missing petals, but has all three other major floral parts. (5 points total)*

A) *What are the three major parts it does have? (1 point each)*

B) *Give me two different terms we could use to describe the arrangement of this specific flower? (1 point each)*

8. *Define or draw the following terms related to cones. (1 points each, 4 points total)*

Umbo:

Apophysis:

Scale:

Serotinous:

9. *Distinguish each of the following pairs (2 points each, 6 points total)*

Soft versus hard pines:

White versus red oaks:

Hardwoods versus softwoods:

Points: _____

10. From a taxonomic perspective, distinguish the term SPECIES from SPECIFIC EPITHET. (1 point)

11. Define and distinguish the following acronyms. (1 point each, 4 points total)

spp.

sp.

ssp.

var.

12. Identify 5 different resources, online or offline, you could use to identify an unknown species (1 point each, 5 points total)

13. Identify and correct errors in the scientific and common names in the sentences below. (1 point each, 5 points total)

My favorite species is red cedar. Its scientific name is *Juniperus Virginiana*. Red Cedar is in the Cupressaceae family.

14. Name two types of **dichotomous** keys that are commonly used. (1 point each, 2 points total)

Points: _____

15. Use the below dichotomous key to demonstrate how you would identify a willow oak specimen.

Circle your choices at each step on the far right, and circle the correct species. (8 points total)

- 1. Needle-like or scale-like leaves.....2
- 1. Broad leaves.....6
 - 2. Needles awn-like or on deciduous branchlets.....3
 - 2. Needles in fascicles.....4
- 3. Needles awn-like, cones < 1 cm in diameter and bluish when mature.....species A
- 3. Needles on deciduous branchlets, cones > 1 cm in diameter and brown when mature.....species B
 - 4. Needles in fascicles of 2 or 3, < 12 cm longspecies C
 - 4. Needles in fascicles of 3, occasionally 4, > 12 cm long.....5
- 5. Cones < 15 cm long, buds brownish.....species D
- 5. Cones > 15 cm long, buds silver-grey.....species E
 - 6. Leaf arrangement opposite or whorled.....7
 - 6. Leaf arrangement alternate.....11
- 7. Leaves compound.....8
- 7. Leaves simple.....10
 - 8. Vine.....species F
 - 8. Tree.....9
- 9. Leaf scar curves around lateral buds.....species G
- 9. Leaf scar circular and below lateral buds.....species H
 - 10. Terminal bud rounded, leaves 3-lobed, fruit matures in spring.....species I
 - 10. Terminal bud pointed, leaves usually 5-lobed, fruit matures in summer.....species J
- 11. Leaves compound.....12
- 11. Leaves simple.....13
 - 12. Typically 5 leaflets, terminal buds elongated.....species K
 - 12. Typically 7 leaflets, terminal buds squat.....species L
- 13. Leaves lobed.....species M
- 13. Leaves unlobed.....species N

16. Use the below dichotomous key to demonstrate how you would identify a green ash specimen.

Circle your choices at each step on the far right, and circle the correct species. (8 points total).

- 1. Needle-like or scale-like leaves.....2
- 1. Broad leaves.....6
 - 2. Needles awn-like or on deciduous branchlets.....3
 - 2. Needles in fascicles.....4
- 3. Needles awn-like, cones < 1 cm in diameter and bluish when mature.....species A
- 3. Needles on deciduous branchlets, cones > 1 cm in diameter and brown when mature.....species B
 - 4. Needles in fascicles of 2 or 3, < 12 cm longspecies C
 - 4. Needles in fascicles of 3, occasionally 4, > 12 cm long.....5
- 5. Cones < 15 cm long, buds brownish.....species D
- 5. Cones > 15 cm long, buds silver-grey.....species E
 - 6. Leaf arrangement opposite or whorled.....7
 - 6. Leaf arrangement alternate.....11
- 7. Leaves compound.....8
- 7. Leaves simple.....10

Points: _____

- 8. Leaf scar curves around lateral buds.....species G
- 8. Leaf scar circular and below lateral buds.....species H
 - 9. Terminal bud rounded, leaves 3-lobed, fruit matures in spring.....species I
 - 9. Terminal bud pointed, leaves usually 5-lobed, fruit matures in summer.....species J
- 10. Leaves compound.....12
- 10. Leaves simple.....13
 - 11. Typically 5 leaflets, terminal buds elongated.....species K
 - 11. Typically 7 leaflets, terminal buds squat.....species L
- 12. Leaves lobed.....species M
- 12. Leaves unlobed.....species N

17. Use the below dichotomous key to demonstrate how you would identify a loblolly pine specimen.

Circle your choices at each step on the far right, and circle the correct species. (8 points total).

- 1. Species has broadleaf type leaves.....2
- 1. Species has needles or scale-like leaves.....3
 - 2. Species has palmate or pinnately compound leaves.....4
 - 2. Species has simple leaves.....5
- 3. Species has scale-like leaves.....6
- 3. Species has needle-like leaves.....7
 - 4. Species has palmately compound leaves.....8
 - 4. Species has pinnately compound leaves.....9
- 5. Species has opposite leaf arrangement.....10
- 5. Species has alternate leaf arrangement.....11
 - 6. Species has woody cones.....12
 - 6. Species has leathery cones.....13
- 7. Species has 2 or 3 needles per fascicle.....14
- 7. Species has 5 needles per fascicle.....15
 - 8. Species has square, red to orange terminal buds..... Species A
 - 8. Species is a woody climbing vine.....Species B
- 9. Species is odd pinnately compound.....Species C
- 9. Species is even pinnately compound.....Species D
 - 10. Species has pointed brown terminal buds.....Species E
 - 10. Species has rounded red terminal buds.....Species F
- 11. Species has chordate leaf shape.....Species G
- 11. Species has palmately lobed leaf.....Species H
 - 12. Species has evergreen foliage.....Species I
 - 12. Species has deciduous foliage.....Species J
- 13. Cones < 1 cm in diameter.....Species K
- 13. Cones > 1 cm in diameter.....Species L
 - 14. Species has large, fuzzy white terminal buds.....Species M
 - 14. Species has small, nondescript terminal buds.....Species N
- 15. Species has uninodal branching.....Species O
- 15. Species does not have uninodal branching.....Species P

Points: _____

18. Create an indented dichotomous key using only leaf features for the following group of species. (8 points)

Campsis radicans
trumpet creeper



Cercis canadensis
eastern redbud



Cornus florida
flowering dogwood



Prunus mexicana
Mexican plum



Carya alba
mockernut hickory



Points: _____