

Name _____

Grade _____

Forestry Test 2012

Directions: There are two sections to this test - general tree questions and tree identification. Do not panic if you can't finish or if you don't think you can get the majority correct. We just want to determine who is the most prepared to compete in this event.

Try to get through as many questions as possible - please at least look at every tree identification.

Blind guessing (putting down a random choice when you can't eliminate any of the answers) is NOT encouraged. Thus for all multiple choice questions, $\frac{1}{4}$ of a point will be subtracted from your final score for each question answered incorrectly. There is no penalty for getting a short answer or a question in any of the other sections wrong. A question left blank will be worth 0 points.

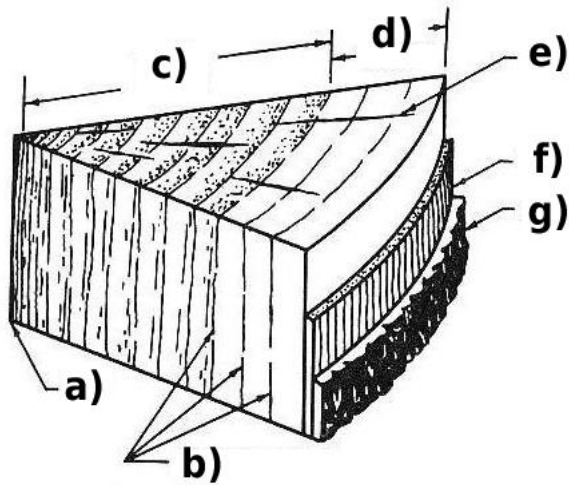
Good luck!

Part I: General Tree Knowledge

1. Select all of the following characteristics that define a tree.

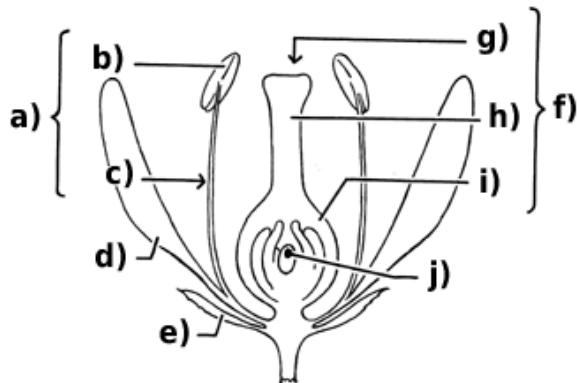
- a) reaches a height of at least 5 meters in adulthood
- b) has a single, woody, perennial stem
- c) is an angiosperm
- d) classified in the kingdom Plantae
- e) has functional leaves

2. Label the parts of the following tree trunk section.



- a) _____
- b) _____
- c) _____
- d) _____
- e) _____
- f) _____
- g) _____

3. Label the parts of the following flower diagram.



- a) _____
- b) _____
- c) _____
- d) _____
- e) _____
- f) _____
- g) _____
- h) _____
- i) _____
- j) _____

4. Briefly explain the USDA plant hardiness zone system.

5. Match the part of a tree with its function or description.

- | | |
|---------------|---|
| _____ stomata | a) the hollow base of a flower |
| _____ taproot | b) allows for gas exchange to occur |
| _____ xylem | c) living tissue within the trunk |
| _____ phloem | d) the stalk that joins a leaf to the stem |
| _____ ovary | e) tissue that transports water and nutrients |
| _____ petiole | f) grows vertically down into the soil |

6. During what season are buds formed?

- a) summer
- b) fall
- c) winter
- d) spring
- e) it varies from year to year

7. What is the primary way conifers are distinguished from broadleaf trees?

- a) climate
- b) evergreen or deciduous
- c) angiosperm or gymnosperm
- d) fruit or cone-bearing

8. Match the following ecosystems with their location on Earth.

- | | |
|----------------------------|--|
| _____ tropical rain forest | a) Europe, Northeastern United States |
| _____ savanna | b) far Northern Hemisphere |
| _____ deciduous forest | c) parts of Australia and South America |
| _____ coniferous forest | d) parts of Canada |
| _____ tundra | e) within 30 degrees latitude of the equator |

9. Name two contributions of trees to their ecosystem (non-human related).

10. Chlorophyll absorbs which color light LEAST effectively?

- a) violet
- b) blue
- c) red
- d) green
- e) white

Part II: Tree ID and Facts

Note that each question is listed BELOW the corresponding image.

Questions 1-2 are based on the following image.



1. What is the common name of this species? _____

2. What type of flower does this tree produce?

- a) thistles
- b) catkins
- c) poppies
- d) bulbs



3. What is the common name of this species? _____



4. What is the common name of this species? _____



5. What is the name of the species that produces this fruit? _____

Questions 6-7 are based on the following image.



6. What is the common name of this species? _____

7. What type of leaves does this tree produce?

- a) simple and pinnately lobed
- b) simple and palmately lobed
- c) compound and pinnately lobed
- d) compound and palmately lobed

Questions 8-9 are based on the following image.



8. What is the common name of this species? _____

9. This species is native to which country?

- a) China
- b) United States

- c) Germany
- d) Brazil
- e) Indonesia



10. What is the common name of this species? _____



11. What is the common name of this species? _____

12. Which statement best describes the relationship between this specie's family and fires?

- a) Fires are rare; when they do occur, they devastate the population.
- b) This family has developed bark resistance and other adaptations to help it survive frequent forest fires.
- c) Though fires will destroy the trees in this family, they also help them reproduce.
- d) Fires are beneficial, as they kill off a species of vine that often prey on this family of trees.



13. What is the name of the species that produces this flower? _____



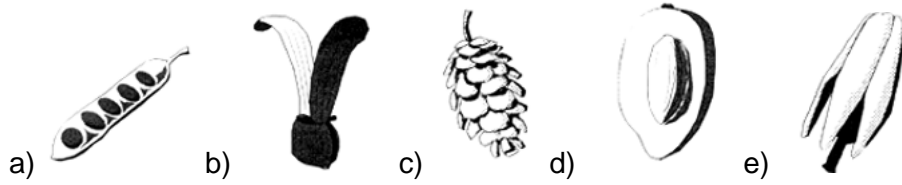
14. What is the common name of this species? _____

Questions 15-16 refer to the following image.



15. What is the common name of this species? _____

16. Which of the following types of fruit belong to this species?



17. What is the common name of this species? _____



18. What is the common name of this species? _____

Questions 19-20 refer to the following image.



19. What is the common name of this species? _____

20. Select all of the following that are true about this specie's family.

- I. they are wind-pollinated
- II. they are threatened by the southern pine beetle
- III. they do not produce resin

- a) I only
- b) III only
- c) I and II only
- d) II and III only
- e) I, II, and III



21. What is the common name of this species? _____



22. What is the common name of this species? _____

Questions 19-20 refer to the following image.



23. What is the common name of this species? _____

24. What is this tree's nickname? _____

Questions 25-26 refer to the following image.



25. What is the common name of this species? _____

26. What early 20th century disaster served to kill off most members of this species in the United States?

- a) a fungal blight deprived the trees of nourishment
- b) urbanization and the demand for timber caused many trees to be cut down
- c) a great flood wiped out the species in the Ohio River Valley
- d) an invasive species of squirrel was introduced that stripped the trees of their bark



27. What is the common name of this species? _____



28. What is the common name of this species? _____

Questions 29-30 refer to the following image.



29. What is the common name of this species? _____

30. Which of the following facts are true about this specie's family?

- I. they produce inedible berries
- II. they are very cross-fertile

- a) I only
- b) II only
- c) I and II
- d) neither

Answer Key

Part I - each correct answer is worth 1 point unless otherwise noted

1. B, D
2. a) pith
b) annual rings
c) heart wood
d) sap wood
e) wood rays
f) cambium
g) bark
3. a) stamen
b) anther
c) filament
d) petal
e) sepal
f) pistil
g) stigma
h) style
i) ovary
j) ovule
4. They consist of geographically defined areas (based roughly on longitude) in which specific trees can grow. One major characteristic of these zones is the minimum temperature the trees within it are capable of withstanding. [3 points]
5. B, F, E, C, A, D [1 point each]
6. A
7. C
8. E, C, A, D, B [1 point each]
9. Possible answers include but are not limited to: prevent erosion, provide weather-sheltered environment, moderate ground temperatures, or produce oxygen/reduce carbon dioxide. [1 point for each correct contribution listed]
10. D

Part II - each identification is worth 2 points; each MC is worth 1 point

1. Quaking Aspen
2. B
3. Red Mulberry
4. Pitch Pine
5. Butternut
6. Sugar Maple
7. B
8. Ginkgo
9. A
10. Pacific Yew

11. Eastern Red Cedar
12. C
13. Southern Magnolia
14. Cabbage Palmetto
15. American Holly
16. D
17. Eastern Hemlock
18. Sassafras
19. Jack Pine
20. C
21. Frosted Hawthorn
22. Honeylocust
23. Ailanthus
24. Tree of Heaven
25. American Chestnut
26. A
27. American Basswood
28. Eastern White Pine
29. Black Willow
30. B

Total questions: 40

Total possible points: 89