

2009 CT Envirothon Forestry Test

Site 1: Tree ID and measurements:

Use common names and fill in the blanks or circle the correct answers.
Use the tree scale stick as needed for measurements.

1. Tree # 1 is a Eastern Red Cedar
2. T or F Tree # 1 is considered a pioneer species because it usually becomes established in openings after a disturbance.
3. Tree # 1 is **not** susceptible to which of the following pests?
 - A. Asian Longhorn Beetle
 - B. Whitespotted Sawyer
 - C. Smaller Japanese cedar longhorn beetle
 - D. All of the above
4. Tree # 2 is a Black Birch and its diameter (dbh) is 4" 6" 8" 10".
5. T or F The wood from tree # 2 has little value as fuelwood because it burns with too much smoke.
6. Tree # 3 is a Shagbark Hickory and its dbh is 10" 12" 14" 16" 18".
7. Tree # 3's merchantable height to the nearest one half 16 foot log is 1 1-1/2 2 2-1/2 3.
8. Tree # 3's volume is 105 board feet.
9. Tree # 4 is a Red Oak and its dbh is 4" 6" 8" 10".
10. T or F The seeds of tree # 4 start to sprout soon after they fall in autumn.

11. Products that form high quality specimens from tree # 4 include:

- A. Clear lumber
- B. Furniture
- C. Barrel staves
- D. Flooring
- E. All of the above
- F. Only A, B, D

12. Tree # 5 is a White Pine and its dbh is 18" 20" 22" 24".

13. If tree # 5 has three 16' logs of merchantable height, what is its volume in board feet? 605

14. A **board foot** is a unit for measuring wood volume in a tree, log or board. How many cubic inches of wood are in one board foot?

- A. 128
- B. 144
- C. 20736
- D. 66

15. Tree # 6 is a White Oak and its dbh is 8" 10" 12" 14".

16. T or F The seeds of tree # 6 start to sprout soon after they fall in autumn.

17. Products that form high quality specimens from tree # 6 include:

- A. Clear lumber
- B. Furniture
- C. Barrel staves
- D. Flooring
- E. All of the above
- F. Only A, B, D

18. Tree # 7's d.b.h is 12" 14" 16" 18".

19. Tree # 7's merchantable height to the nearest one half 16 foot log is
1 1-1/2 2 2-1/2 3.

20. Tree # 7's volume is 130 board feet.
21. T or F The wood from tree # 7 is noted not only for its hardness but also for its toughness and ability to stand up under sudden shocks and is commonly used for tool handles.
22. Tree # 8 is a Sugar Maple and its dbh is 10" 12" 14" 16" 18".
23. Tree # 8's merchantable height to the nearest one half 16 foot log is
1 1-1/2 2 2-1/2 3.
24. Tree # 8's volume is 80 board feet.
25. T or F Flooring made from the wood of tree # 8 is used in bowling alleys worldwide.
26. Tree # 9 is a Red Maple.
27. Which of the following factors most likely attributed to tree # 9's damaged condition?
- A. Wind and or ice
 - B. Poor branch attachment (a genetic factor)
 - C. Lightning
 - D. A. & B.
 - E. All of the above

Site 2: Forest Management

The following information applies to questions # 28 to # 31.

Each question is associated with a corresponding site. At each site the blue marked trees have been identified for removal to match one of the following Forest Management methods. Match the site with the phrase that best describes the Forest Management method that was applied. (Use each phrase only once.)

- A. Forest Preserve
- B. Crop Tree Release
- C. Silvicultural Clearcut
- D. Diameter Limit/High Grading
- E. White Pine Release/Stand Conversion

Question # 28	_____ E _____
Question # 29	_____ C _____
Question # 30	_____ A _____
Question # 31	_____ B _____

32. Which forest management method(s) below favors the establishment of shade **intolerant** species? [Circle the letter of the correct answer.]

- | | |
|----------------------------------|-----------------------|
| A. Single tree selection method | D. Shelterwood method |
| B. Group selection method | E. A & C |
| C. Silvicultural clearcut method | F. C & D |

33. Generally, two site factors that have the most influence on the development of trees within a stand, **and** on which foresters **can** have a significant influence are:

- A. Light and space in the canopy**
- B. Soil moisture and water table
- C. Soil fertility and acidity
- D. Insects and fungus diseases

34. Environmental (site) factors include both **abiotic** and **biotic** conditions. What are the **abiotic** environmental conditions associated with moisture, soil fertility, aspect, slope and drainage collectively known as?

- A. Limiting Factors
- B. Site Quality
- C. Site Structure
- D. Site Factors

35. Trees that are found in the upper canopy are usually either:

- A. Intermediate/Suppressed
- B. Suppressed/Co-dominant
- C. Co-dominant/Dominant
- D. Dominant/Intermediate

36. Trees that are found in the lower canopy are usually either:

- A. Intermediate/Suppressed
- B. Suppressed/Co-dominant
- C. Co-dominant/Dominant
- D. Dominant/Intermediate

37. What regeneration method provides the greatest amount of early succession habitat?

- A. Silvicultural Clear-cut
- B. Single-tree selection
- C. Shelterwood harvest
- D. Group selection

Site 3: Forestry Keys, Invasive Species, & Biodiversity

Using the provided Tree Finder, identify the following samples: (Both parts of the question must be answered correctly for credit.)

38. Specimen # 38 is (use the scientific name) *Robinia Pseudo-Acacia* and is found on page 22 of the Tree Finder.

39. Specimen # 39 is (use the scientific name) *Carpinus caroliniana* and is found on page 51 of the Tree Finder.

40. Specimen # 40 is (use the scientific name) *Fraxinus americana* and is found on page 17 of the Tree Finder.

41. The visual characteristics of this sample indicate a branching pattern of:

- A. opposite
- B. alternate
- C. whorled
- D. variable
- E. none of the above

42. The visual characteristics of this sample indicate a leaf type or pattern of:

- A. simple
- B. palmate
- C. simple compound
- D. palmate compound
- E. none of the above

43. As a result of the above, the only species this could be is:

- A. red oak
- B. red maple
- C. ohio buckeye
- D. sassafras
- E. black walnut

44. Of the five tree branch samples on the table, only one is NOT native to the United States. Circle the letter of the introduced species.

- A. **B.** C. D. E.

45. One the five samples on the table is the basis of the maple syrup industry in the northeast U.S. and Canada. Circle the letter of this species.

- A. B. C. D. **E.**

46. Match the letter of the insect pests on the table to its common name below.

D Asian Longhorned beetle **A** Emerald Ash Borer

C Gypsy Moth **B** Eastern Tent Caterpillar

47. At this time, which insect pest(s) has/have not been discovered in Connecticut?

- A. Emerald Ash Borer
- B. Hemlock Woolly Adelgid
- C. Asian Long Horn Beetle
- D. White Pine Weevil
- E. Smaller Japanese cedar longhorn beetle
- F. **A. & C.**
- G. All of the above

48. Biodiversity is a measure of:

- A. The number of species in an environment
- B. The number of individuals and species in an environment
- C. The number of different species when comparing different environments
- D. The number of different varieties within a species.
- E. **All of the above**

49. The “edge” of a habitat is defined by:
- A. Physical edges, such as forest edges, lake shores, and rivers.
 - B. The maximum distance an organism can move, for example, the furthest range a wolf might wander.
 - C. Wherever we define the boundary, as long as we are specific about where that boundary is and how we define it.
 - D. A and B only
 - E. A, B, and C
50. T or F A “healthy” environment always has a high biodiversity.
51. T or F When an environment is disturbed (people, fire, hurricane, etc), biodiversity will always go down.
52. Of the 10-100 million species on the planet, how many have been described to date?
- A. 1-2 million
 - B. 2-5 million
 - C. 5-10 million
 - D. 10-100 million