

**2010 Area 1 Envirothon**  
**Shelby/Mansfield KOA, Crawford County, Ohio**  
**Forestry**

*Do not write answers on this paper.*

o *Indicate the one best answer for each question on the “Forestry”*

*Scantron answer card.*

o *Use a No. 2 pencil*

o *Erase completely to change*

1. Domestic species commercially marketed as softwoods all have a similar characteristic. What characteristic puts a particular piece of wood into the softwood market?
  - A. Harvested from a coniferous tree
  - B. Specific gravity less than 0.4
  - C. No resin canals
  - D. Sapwood with less than 15% heartwood in the total piece
  
2. Which of the following is the largest world-wide use of wood products?
  - A. Construction material
  - B. Pulp and paper products
  - C. Pallets
  - D. Fuel
  
3. There are several factors that will influence a tree’s growth rate. Which of the following does a forest manager generally have the most control over in a forested situation?
  - A. Water
  - B. Sunlight
  - C. Soil nutrients
  - D. Carbon dioxide
  
4. Which of the following described pieces of wood contains 6 board feet of lumber?
  - A. 12 inches long x 12 inches wide x 12 inches thick
  - B. 1 foot long x 12 inches wide x 1 inch thick
  - C. 12 feet long x 6 inches wide x 1 inch thick
  - D. 12 inches long x 6 inches wide x 2 inches thick
  
5. Which of the boards in the Question 4 has the most board feet?
  - A.
  - B.
  - C.
  - D.
  
6. Which summary best defines the term “forest structure”?
  - A. The shape of the forested area on a map
  - B. The size of the forested area expressed in number of acres or hectares
  - C. The description of plants in each vertical layer of a forest
  - D. The average maximum height of the canopy trees throughout a forest

7. What does “stumpage price” refer to?
- A. Value of a log after it is sawn into lumber
  - B. Value of a log delivered to a saw mill
  - C. Value of a log after it has been cut but before it is delivered to the mill
  - D. Value of a standing tree

Forests have many impacts on water resources. For each of the following, select the answer that correctly identifies a way that forests and water interact.

8. An area being heavily forested generally results in:
- A. Increased frequency of flooding
  - B. Decreased frequency of flooding
9. Precipitation in forested areas:
- A. Infiltrates the soil more readily
  - B. Has more difficulty infiltrating the soil
10. Urban forests:
- A. Increase the need for storm water retention structures
  - B. Decrease the need for storm water retention structures
11. Trees over a stream will result in:
- A. More available dissolved oxygen
  - B. Less available dissolved oxygen
12. A forested buffer along open water will cause:
- A. Improved water quality
  - B. Inferior water quality
13. Which of these trees would produce ‘hard mast’?
- A. Tree A
  - B. Tree B
  - C. Tree C
  - D. Tree D
14. Which of these species is not native to the area?
- A. Plant A
  - B. Plant B
  - C. Plant C
  - D. Plant D

Look at the cross section of the tree, and identify the labeled parts  
(use each answer only one time):

15. Heartwood
16. Sapwood
17. Xylem
18. Phloem
19. Which most accurately describes this plant?
  - A. Deciduous shrub
  - B. Deciduous tree
  - C. Coniferous shrub
  - D. Coniferous tree
20. Determine the estimated volume of marketable lumber in this tree (based on the numbers from chart on the provided scale stick).
  - A. 324 Board Feet
  - B. 972 Board Feet
  - C. 1068 Board Feet
  - D. 1488 Board Feet
21. What species of tree is this?
  - A. *Quercus velutina* (Black oak)
  - B. *Pinus Strobus* (White pine)
  - C. *Gymnocladus dioicus* (Kentucky Coffeetree)
  - D. *Prunus serotina* (Black Cherry)
22. What species of tree is this?
  - A. *Fagus grandifolia* (American beech)
  - B. *Quercus rubra* (Red oak)
  - C. *Acer saccharum* (Sugar maple)
  - D. *Tilia americana* (Basswood)
23. What is the DBH of this tree?
  - A. 32'
  - B. 64"
  - C. 15"
  - D. 20"
24. Using the same tree from the previous question: Assuming that the mean annual increment is one quarter inch, estimate the age of this tree.
  - A. 80 Years
  - B. 60 Years
  - C. 40 Years
  - D. 16 Years

25. If average stumpage value for this same tree (question 23 & 24) is \$500/Mbf (Doyle rule), what is the approximate value of this tree?
- A. \$112,500.00
  - B. \$112.50
  - C. \$50.50
  - D. \$12.50

## Answers

1. A
2. D
3. B
4. C
5. A
6. C
7. D
8. B
9. A
10. B
11. A
12. A
13. A
14. D
15. C
16. B
17. D
18. A
19. B
20. C
21. D
22. C
23. D
24. A
25. B