

2024 Area 2 Envirothon – FORESTRY

1. Approximately what percentage of Ohio is forested today?
 - A. 10%
 - B. 30%**
 - C. 40%
 - D. 70%

2. Best Management Practices (BMPs) in forestry involve the reduction or elimination of soil erosion during silvicultural operations. These include:
 - A. Taking the most direct route from the log landing to the harvesting site to minimize soil disturbance.
 - B. Using pole-sized trees to create a bridge across large, intermittent streams.
 - C. Not using bumper trees to minimize damage to the residual stand.
 - D. Using natural breaks in the contour to control the movement of water.**

3. Using the chart below, determine how many water bars need to be installed for a 520-foot stretch of skid road with a 25% grade.
 - A. 13**
 - B. 9
 - C. 20
 - D. 15

Slope	Distance between water bars
2 %	250 ft.
5 %	135 ft.
10 %	80 ft.
15 %	60 ft.
20 %	45 ft.
25 %	40 ft.
30 %	35 ft.

4. Trees can have opposite or alternate branching patterns. Which of the following trees have opposite branching?
 - A. Maple, sassafras, blackgum, dogwood
 - B. Ash, oak, sycamore, ailanthus
 - C. Dogwood, ash, maple, buckeye**
 - D. Walnut, sycamore, buckeye, American beech

5. Identify the Tree Species Labeled on site as TREE #5:
 - A. American Beech**
 - B. Yellow Poplar (Tuliptree)
 - C. Sugar Maple
 - D. Red Maple

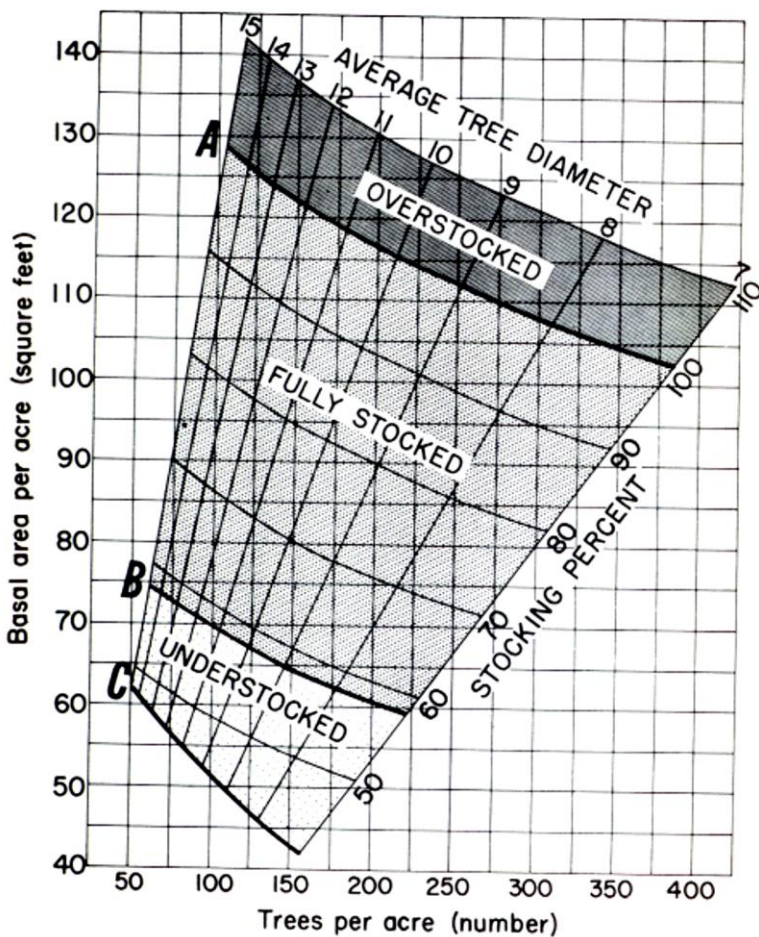
6. Forested areas along streams and rivers lower water temperature, provide unique habitat for both aquatic and terrestrial plants and animals, and help improve water quality by trapping pollutants before they can enter the water. What are these forested areas called?
- A. Aquatic forests
 - B. Hydric forests
 - C. Riparian forests
 - D. Streamside management zones
7. Wildfires in Ohio are predominantly caused by:
- A. Lightning
 - B. Unattended campfires
 - C. Burning of yard waste
 - D. Cigarettes
8. Which is an example of even-aged forest management?
- A. Group selection
 - B. Single-tree selection
 - C. Clearcut
 - D. Diameter limit harvest
9. Which of the following tree species is the most shade-tolerant?
- A. Yellow poplar (*Liriodendron tulipifera*)
 - B. American beech (*Fagus grandifolia*)
 - C. Black walnut (*Juglans nigra*)
 - D. Chestnut oak (*Quercus montana*)
10. What tree species is the tree labeled on site as TREE #10?
- A. American Beech
 - B. American Elm (White Elm)
 - C. Sugar Maple
 - D. Slippery Elm (Red Elm)
11. You are in the field with a landowner when they ask you how big the large sycamore tree that's growing on their property is. You forgot your diameter tape at the office, but you have some flagging and a linear tape measure. After wrapping the flagging around the sycamore at DBH, you use the tape measure and determine the flagging is 120 linear inches long. You know that a diameter tape uses the constant π to convert circumference to diameter. How many diameter inches is the sycamore?
- A. 60 diameter inches
 - B. 38 diameter inches
 - C. 42 diameter inches
 - D. 28 diameter inches

12. As the living tissues within a tree die, they aren't shed the way that humans shed skin cells. Instead, they become part of the tree protecting it or supporting it. When the phloem dies, it becomes?

- A. Bark
- B. Sapwood
- C. Roots
- D. Heartwood

13. Use the Upland Central Hardwood Stocking Guide provided below for the following question. A landowner asks you to determine if their 30-acre hardwood stand would benefit from a thinning. Trees in this stand, on average, are 9 inches in diameter (DBH). The basal area is 110 square feet per acre. What is the stand's stocking level and approximately how many trees per acre are present?

- A. The stand is fully stocked with approximately 250 trees per acre.
- B. The stand is overstocked with approximately 275 trees per acre.
- C. The stand is fully stocked with approximately 125 trees per acre.
- D. The stand is understocked with approximately 115 trees per acre.



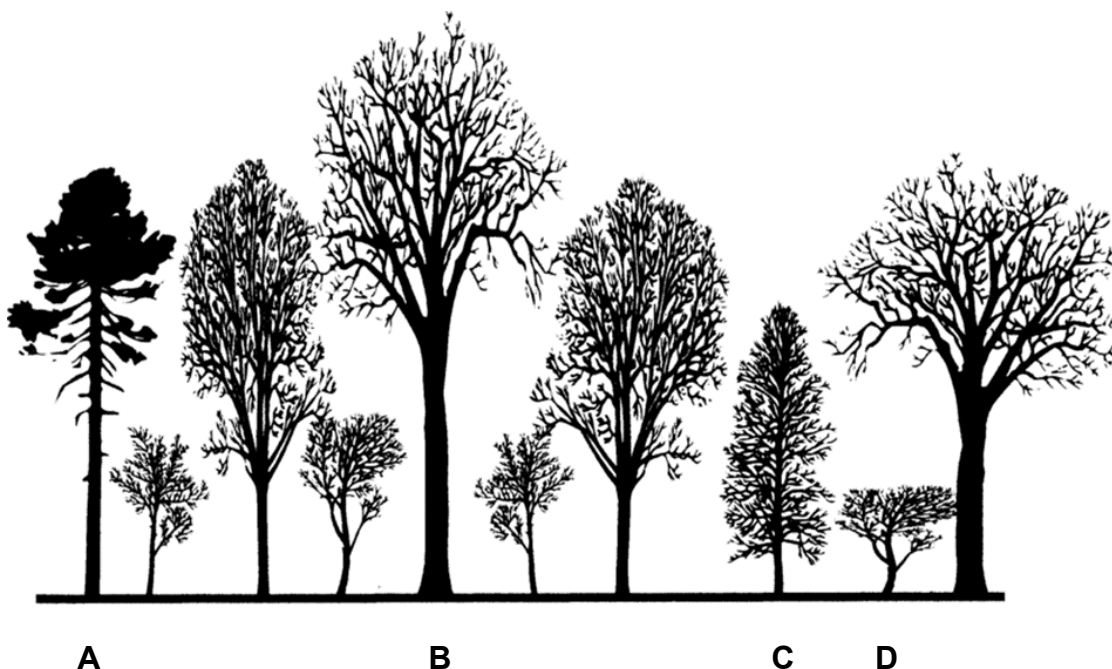
14. In recent years, wildfires have been increasing in size and severity, threatening human life and development and wildlife habitat. A tool that forest and fire managers use to reduce the risk of unplanned fires is prescribed fires. Fighting fire with fire has many benefits. Prescribed fires can do all of the following EXCEPT:
- A. Improve wildlife habitat
 - B. Promote the growth of trees, wildflowers, and other plants
 - C. Eliminate the risk of wildfires in the area
 - D. Recycle nutrients back into the soil
15. Identify the Tree Species labeled on site as TREE # 15:
- A. Yellow Poplar (Tuliptree)
 - B. Sugar Maple
 - C. Black Cherry
 - D. Silver Maple
16. Carbon dioxide is the main greenhouse gas emitted by humans. Forests as a whole store much more carbon than they produce. This carbon storage helps offset some of the United States' greenhouse gas emissions. In an individual forest tree, carbon storage occurs in:
- A. Foliage, seeds, bark, stumps, trunks
 - B. Mycelia, branches, trunk, foliage, bark
 - C. Xylem, stump, soil, foliage, roots
 - D. Roots, cambium, stems, branches, mycelia
17. One acre is 43560 square feet. The recommended spacing when planting seedlings for timber production is between 8-12 feet. If you're planning a 7.2-acre hardwood tree planting with 10 ft x 10 ft spacing, approximately how many seedlings will you need?
- A. 3,874
 - B. 2,592
 - C. 3,139
 - D. 3,485
18. Ailanthus, also known as tree-of-heaven, is a highly invasive tree species that is not native to the United States. There are many methods used to control this species in our native woodlands. Which of the following control methods is not recommended due to the hundreds of sprouts that come up afterward?
- A. Basal bark herbicide application - spraying an oil-based herbicide around the bottom of the trunk.
 - B. Foliar herbicide application - spraying the leaves with herbicide.
 - C. Hack and squirt herbicide application (herbicide injection) – make cuts around the trunk and inject or spray herbicide into the cuts.
 - D. Mechanical control methods - cutting down large trees or mowing over small seedlings.
19. The tree, Ailanthus (tree of Heaven) is a primary host plant for which invasive insect?
- A. Spongey Moth
 - B. Emerald Ash Borer
 - C. Asian Longhorn Beetle
 - D. Spotted Lantern Fly

20. What is the tree species identified on site as TREE #20:

- A. Northern Red Oak
- B. Pin Oak
- C. Sugar Maple
- D. Black Oak

21. In the image below, the trees labeled A and D are:

- A. Dominant (A) and Intermediate (D)
- B. Co-dominant (A) and Suppressed (D)
- C. Co-Dominant (A) and Intermediate (D)
- D. Dominant (A) and Suppressed (D)



22. As part of a conservation effort in your watershed, your class has been asked to plant trees in a riparian area that is currently a hay field. The local nursery has supplied you with the following list of trees. Which tree would you not want to be part of your riparian trees to be planted?

- A. Chestnut Oak.
- B. Sycamore.
- C. Pin Oak.
- D. Silver Maple.

23. Some white pines can appear whitewashed starting around the middle of the tree. The white appearance indicates an infestation in the pine planting. What causes the white appearance on the stems?

- A. Pine Bark Adelgid
- B. Lichen
- C. Woolly Pine Adelgid
- D. Pine Bark Fungi

24. The emerald ash borer has devastated our forests by killing millions of trees across the Eastern United States. When these trees fall to the forest floor, they provide nutrients to plants, habitat for wildlife, and are important in storing carbon - to name a few benefits. This woody material is an example of?
- A. Fallen snags
 - B. Slash
 - C. Course woody debris
 - D. Brush piles
25. Identify the tree species on site labeled as TREE #25:
- A. Bitternut Hickory
 - B. American Red Oak
 - C. Sugar Maple
 - D. Pignut Hickory

😊 ALL DONE!

Special Thanks to

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John Jolliff for the site-specific Tree ID questions.