

1. If conducting a timber inventory utilizing a variable radius plot sampling method with a 5 basal area factor using an angle gauge, would this tree be counted?

- a. **Yes**
- b. No



2. What is the basal area per acre of a variable radius plot with 6 “in trees” using a 20 basal area factor (BAF) prism?

- a. **120**
- b. 220
- c. 60
- d. 360

3. Which range is the ideal number of sample trees per plot with variable point sampling methods?

- a. 1-4
- b. **5-12**
- c. 13-20
- d. 20-27

4. A major way that exotic invasive plants gain a foothold in a woods is:
 - a. Cattle grazing in the woods
 - b. Birds disseminating seeds
 - c. a & b**
 - d. none of the above

5. You are standing in a recent harvest opening where full sunlight reaches the forest floor. Which group of tree species is most likely to regenerate successfully here?
 - a. Shade-tolerant species like sugar maple and beech
 - b. Mid-tolerant species like red maple
 - c. Shade-intolerant species like oak and hickory**
 - d. Conifers only

6. A board foot is:
 - a. A unit of measure used in the United States to estimate the volume of lumber in a tree, log, or board.
 - b. A piece of wood 12" wide, 12" thick, and 1 foot long.
 - c. A piece of wood which contains 12 cubic inches.
 - d. Both A and B**

7. Natural woody debris such as stumps, logs, and fallen twigs and branches that lie decaying on the ground have the following environmental effect?
 - a. They result in large quantity of harmful bacteria entering both the surface and ground water.
 - b. They can wash into a stream creating log jams that have no environmental benefit.
 - c. They are the most often used materials by beaver for constructing dams.
 - d. They add beneficial organic material to the soil and provide habitat for detritivores.**

8. Which of these species is shade intolerant?
 - a. Pawpaw
 - b. Yellow Poplar**
 - c. Red Maple
 - d. Eastern Hemlock

9. Which of the following groups of trees have opposite leaves and branches?

- a. **Maple, ash, dogwood, buckeye**
- b. Oak, hickory, dogwood, sassafras
- c. Cherry elm, walnut
- d. None of the above

10. Which species is a shade tolerant species?

- a. **American Basswood**
- b. White Oak
- c. Red Pine
- d. Bigtooth Aspen

11. This site has undergone ongoing invasive species management, including removal efforts. However, reinvasion continues due to seed dispersal by wildlife and persistent seed banks in the soil. Identify the two invasive plant species flagged in this area.

- a. Tree of heaven and multiflora rose
- b. **Multiflora Rose and Glossy Buckthorn**
- c. Honeysuckle and Glossy Buckthorn
- d. Multiflora Rose and Privet

12. What cutting method removes all stems >2" DBH on an area >5-acres in area?

- a. Group Selection
- b. **Clearcut**
- c. Shelterwood
- d. Select Cut

13. Some trees produce chemicals that reduce the growth of competing plants. This process is called Allelopathy. What tree species common to Ohio produces a chemical that causes an allelopathic reaction?

- a. White Oak
- b. **Black Walnut**
- c. Sassafras
- d. White Pine

14. Which ownership category holds the largest amount of forestland in Ohio?

- a. National Forest and other federal
- b. State and Local governments
- c. Industry
- d. Private families**

15. How could imported plants used for landscaping adversely impact forest ecosystems?

- a. They may become invasive and compete for space with native plants**
- b. Birds stay in people's yards instead of inhabiting the forest
- c. They use more oxygen than native species
- d. Poison ivy might spread

16. Identify the tree species with the flagging on it.

- a. Black Cherry**
- b. Red Oak
- c. Shagbark Hickory
- d. Tulip Poplar

17. The state tree of Ohio is the Ohio Buckeye *Aesculus glabra*. The Native Shawnee and Lenape tribes' name for buckeye is Hetuch which means "eye of the buck". This tree gets its common name from what part of the plant.

- a. Leaves
- b. Bark
- c. Seed**
- d. Buds and branches

18. In forest ecology, trees compete between each other for:

- a. Air
- b. Nutrients & Water
- c. Light
- d. B & C only**

19. Where should tree diameter be measured?

- a. 5 feet above the ground on the uphill side.
- b. 5.5 feet above the ground on the downhill side.
- c. **4.5 feet above the ground on the uphill side.**
- d. 4 feet above the ground on the downhill side.

20. What part of the trunk is inactive, because the cells have died, but provides strength to that trunk?

- a. **Heartwood**
- b. Sapwood
- c. Bark
- d. Root collar

21. In this stand, you notice ahead of you a large opening in the canopy. What forestry best management practice is being demonstrated and what is the primary goal?

- a. Clearcutting; maximizing timber yield
- b. Shelterwood; establish even-aged regeneration
- c. **Group selection; promote uneven-aged structure and regeneration of diverse species**
- d. Thinning; reduce competition in even-aged stands

22. Intermediate treatments, including the removal of vines and cull trees, that leave a stand of good quality trees of the desired species is a:

- a. **Timber Stand Improvement**
- b. Shelterwood Cut
- c. Sanitation Cut
- d. Treatment Cut

23. Which of the following processes may have a positive effect on woodlands?

- a. **Livestock grazing**
- b. Land clearing for commercial real estate development
- c. Invasion of non-native plants
- d. None of the above

24. When some people think of a timber harvest, they picture clearcutting and often associate it with negative impacts on forests. However, this perception does not reflect many modern forestry practices. At Working Woods, natural resource professionals use timber harvesting as a management tool to actively support forest health and resilience. How can sustainable timber harvesting support forest health from an ecological standpoint?
- a. By removing particular species so high value species thrive
 - b. By prioritizing short-term timber production and financial benefit over long-term ecological outcomes
 - c. By eliminating natural regeneration to maintain a uniform forest structure
 - d. **By mimicking natural disturbance processes, promoting regeneration, and increasing species and structural diversity**
25. A Log Rule is a method to determine the board foot volume in logs and standing trees. Which of the following **is not** a standard Log Rule:
- a. Doyle
 - b. Scribner
 - c. International $\frac{1}{4}$ "
 - d. **Murphy**