

2018 Area 5 Envirothon Forestry

1. Branching patterns (opposite or alternate) can be useful characteristics when identifying tree species. Which of the following would you expect to display an alternate branching pattern?
 - A. Flowering dogwood
 - B. Ohio buckeye
 - C. Sugar maple
 - D. White oak**
2. Forestry Best Management Practices (BMPs) are intended to protect water quality during timber harvesting operations. Which of the following is a Forestry BMP?
 - A. Broad based dip**
 - B. High - lead felling
 - C. Spoil piling
 - D. Stream channelization
3. Some trees produce chemicals that reduce the growth of competing plants by releasing a chemical. This process is called Allelopathy. What tree species common to Ohio produces a chemical that causes an allelopathic reaction?
 - A. Black Walnut**
 - B. Sassafras
 - C. White Pine
 - D. White Oak
4. Trees that have the capacity to grow and thrive under heavy shade are considered shade tolerant. Which of the following trees are shade tolerant?
 - A. Sugar Maple and Aspen
 - B. Sugar Maple and Beech**
 - C. Sugar Maple and Sassafras
 - D. Sugar Maple and Yellow Poplar
5. Natural woody debris such as stumps, logs, fallen twigs, and branches that lie decaying on the ground have the following environmental effect?
 - A. They result in large quantity of harmful bacterial 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 (earthworms).**
6. Which ownership category holds the largest amount of forestland in Ohio?
 - A. Family Forests**
 - B. Industry
 - C. National Forest and other federal land
 - D. State and Local governments

7. Where should tree diameter be measured?
- A. 4 feet above the ground on the uphill side
 - B. 4 feet above the ground on the downhill side
 - C. 4 feet 6 inches above the ground on the uphill side**
 - D. 4 feet 6 inches above the ground on the downhill side
8. An invasive species is a plant, fungus, or animal species that is not native to a specific location (an introduced species), and which has a tendency to spread to a degree believed to cause damage to the environment, human economy or human health. Identify the invasive tree marked with an orange X.
- A. Catalpa
 - B. Norway Maple
 - C. Osage Orange
 - D. Tree of Heaven**
9. This bottom land area along a stream is referred to as:
- A. Biome
 - B. Riparian**
 - C. Upland
 - D. Wetland
10. Using your Tree Measuring Stick (Biltmore Stick), the DBH (Diameter at Breast Height) of Tree #1 is closest to:
- A. 20"
 - B. 23"
 - C. 25"**
 - D. 28"
11. Again, using your Tree Measuring Stick, the number of 16' logs is closest to (measure to the first large limb):
- A. Four logs
 - B. One log
 - C. Three logs**
 - D. Two logs
12. Using the measurements you recorded in Q.'s 12 and 13, what is the board foot volume for Tree #1?
- A. 414
 - B. 558**
 - C. 660
 - D. 758

13. The vine (pink flagging) growing up into Tree #1 is a:
- A. Honeysuckle vine
 - B. Grapevine**
 - C. Poison ivy vine
 - D. Trumpet creeper vine
14. Tree #2 is a native mast producing tree. Tree #2 is a :
- A. Hickory
 - B. Black Walnut
 - C. Buckeye
 - D. Red Oak**
15. Grazing woodlands often result in changes to the species make-up of the woods. Which of the following species is least likely to increase with the presence of livestock?
- A. Hawthorn
 - B. Ohio Buckeye
 - C. Red Cedar
 - D. Red Oak**
16. Two introduced insects are causing damage and mortality to trees in Ohio. Those insects are:
- A. American Burying Beetles and Yellow Jackets
 - B. Asian Longhorned Beetles and Emerald Ash Borers**
 - C. Carpenter Ants and Lady Bugs
 - D. Fruit Flies and Emerald Ash Borers
17. An Increment Borer is a common forestry tool. The Increment Borer is :
- A. A tool used to measure tree leaves.
 - B. A tool used to determine growth or tree age from a small sample bored from the trunk of trees.**
 - C. A tool used to determine tree height.
 - D. A tool used to determine tree diameter.
18. The forest fire season in Ohio is usually during:
- A. Fall and spring**
 - B. Spring and summer
 - C. Summer and winter
 - D. Winter and fall
19. What is the deep central or primary root that grows vertically downward called?
- A. Feeder root
 - B. Lateral root
 - C. Stump sprout
 - D. Tap root**

20. A Log Rule is a method to determine the board foot volume in logs and standing trees. All of the following are standard log rules except:
- A. Doyle rule
 - B. International $\frac{1}{4}$ " rule
 - C. Murphy rule**
 - D. Scribner rule
21. The volume of standing timber in Ohio has _____ over the past 20 years.
- A. Decreased significantly
 - B. Decreased Slightly
 - C. Increased significantly**
 - D. Remained about the same
22. The number of acres burned by wildfires has been increasing since the mid 1960's. Generally, low intensity fires increase plant productivity and high intensity fires result in decreased productivity and plant diversity. Which of these choices is not a method of reducing the fire fuel load in a given area?
- A. Grazing
 - B. Prescribed Fire
 - C. Fragmentation**
 - D. Timber Harvesting
23. The term **log** is used as a measuring unit. How many feet long is a standard log in Ohio and most eastern states?
- A. 12 feet
 - B. 16 feet**
 - C. 20 feet
 - D. 24 feet
24. Crop Tree Release is a good tool to improve the growth of young, high quality trees. When using Crop Tree Release which trees should be targeted for removal?
- A. All trees that do not meet the landowner's management objectives
 - B. Crop trees
 - C. Dead or dying trees
 - D. Trees with crowns that touch the crowns of crop trees**
25. Thousand Cankers Disease (TCD), which was found in Butler County Ohio in 2012, is carried by a small twig beetle. Which of the following tree species is susceptible to TCD?
- A. Black Walnut**
 - B. Ohio Buckeye
 - C. Red Maple
 - D. White Oak

2018 Envirothon Forestry Key

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