

AREA 2

2017 Envirothon Questions for **Forestry** Station

May 3, 2017 (Questions 1 thru 5 are Site Specific)

(Site Specific)

1. Measure the Diameter of Tree #1
- A. 28
 - B. 30
 - C. 32
 - D. 34
 - E. 36

(Site Specific)

2. How many logs are in Tree #1?
- A. 1 ½
 - B. 2
 - C. 2 ½
 - D. 3
 - E. 3 ½

(Site Specific)

3. How much lumber is in Tree #1? (using the Doyle Rule)
- A. 730
 - B. 860
 - C. 990
 - D. 590
 - E. 1120

(Site Specific)

4. When Tree #1 is harvested and turning into lumber, what is the primary use of the lumber?
- A. Kitchen cabinets
 - B. Framework for upholstered furniture
 - C. Tool handles
 - D. Flooring
 - E. A & D

(Site Specific)

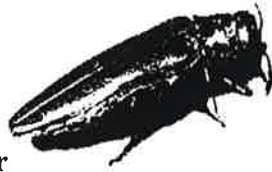
5. The wounds on some of the trees in this stand are from
- A. The weather
 - B. Equipment running into the bole of the trees
 - C. Buffalo rubbing on the trees
 - D. All of the above
 - E. None of the above

6. Identify the seedling marked with ribbon
- A. White oak
 - B. Northern red oak
 - C. Sugar maple
 - D. Ash
 - E. Black walnut

7. Id Tree #2
- A. Shagbark hickory
 - B. Bitternut hickory
 - C. Sugar maple
 - D. Ash
 - E. American Beech
8. Id Tree #3
- A. Sugar maple
 - B. Red maple
 - C. Ash
 - D. White elm
 - E. American beech
9. Id Tree #4
- A. American hornbeam
 - B. American beech
 - C. American elm
 - D. American hophornbeam
 - E. American serviceberry
10. If you were to utilize conservation practices, what plants in this stand could be controlled?
- A. Bush honeysuckle
 - B. Autumn olive
 - C. European buckthorn
 - D. Phragmites grass
 - E. All of the above
11. The commercial timber value of a tree can be determined by what factor(s)?
- A. Board foot volume
 - B. Quality of the log
 - C. Species
 - D. All of the above
 - E. None of the above
12. What is the purpose of using best management practices (BMP's) in a logging operation?
- A. Create wildlife habitat
 - B. To create jumps for all terrain vehicles
 - C. Replace topsoil that is lost in the harvesting operation
 - D. To limit access
 - E. Aid in the control of soil erosion from the logging site.
13. Which harvest technique favors shade tolerant species?
- A. Clear-cutting
 - B. Shelter-wood
 - C. Single tree selection harvest
 - D. High grading
 - E. Seed Tree

14. How does wild grapevine affect the growth rates of trees?
- A. It shades the tree(s) crown, and often leads to bad form
 - B. It helps the tree to get nutrients from the soil
 - C. It breaks up the tree(s)
 - D. Both A & C
 - E. None of the above
15. Which of the following trees would be considered a hard mast producing tree?
- A. Black cherry
 - B. Northern red oak
 - C. American serviceberry
 - D. Paw-paw
 - E. None of the above
16. This stand contains down woody debris on the forest floor. What are some of the benefits to leaving dead wood, both standing and down, for wildlife?
- A. The dead trees become shelter to the wildlife if the tree contains a cavity
 - B. It potentially could provide nesting cavities for birds that require this type of habitat.
 - C. Insects are attracted to recently killed or dead trees which will attract woodpeckers due to the food source
 - D. All of the above
 - E. None of the above
17. What is not the basic function of a tree roots?
- A. Absorb and conduct water and nutrients for the tree
 - B. Store and return food to the top of the tree
 - C. Anchor the tree
 - D. Aerates the soil
 - E. All of the above
18. Hypothetically, a timber harvest has occurred and the skid trail that was used is on a slope of 30%. At the bottom of the hill is a small stream/river that feeds into a trout stream/river. The logger used a portable bridge to cross the river. What needs to be done to prevent soil erosion from entering the waterway?
- A. Install silt fencing along the bank or the stream/river
 - B. Install water bars at the intervals along the skid trail
 - C. Plant grass or wheat on the skid trails and riparian area of the skid trails
 - D. All of the above
 - E. None of the above
19. Allowing livestock in the woodland
- A. Damages tree roots and trunks
 - B. Contributes to non-point source pollution
 - C. Reduces the value of timber when harvested
 - D. Reduces species diversity
 - E. All of the Above

20. Currently in the state of Ohio we have 2 major non-native insects killing a large number of trees. Id the correct 2 insects.



A. Emerald Ash Borer



B. Tiger Beetle



C. Asian Longhorn beetle



D. Clearwing borer

E. A & C

21. The main purpose of silviculture is to
- A. Allow a forest to grow haphazardly
 - B. Determine stumpage values
 - C. Grow more useful forest in a shorter length of time
 - D. Preserve forest stands in their natural state
 - E. All of the above
22. The State of Ohio has a very diverse population of different tree species. However, the State has a dominant group of trees that represents the largest percentage of trees found in the State. This group of trees is known as the?
- A. Ash – Elm group
 - B. Beech – Maple group
 - C. Cottonwood – Sycamore – Silver Maple group
 - D. Oak – Hickory group
 - E. Yellow Poplar – Northern Red Oak group

23. Tree blow downs are sometimes observed in forested areas. Choose the major reason for tree throws.
- A. Poor seed choices for natural tree selection
 - B. Soil damage from burrowing forest wildlife
 - C. High seasonal water tables or shallow restrictive horizons
 - D. Compaction from previous land use
24. A common wisdom states that after trees are harvested in the woods, the forest is destroyed. A more accurate and informative statement about forest management would be reflected in which statement below?
- A. The harvesting of trees thins the forest, so the remaining trees cannot increase the size of their crowns and actually become less productive.
 - B. The roads made during the harvest operation created new narrow openings known as edge that is not beneficial to many species of wildlife
 - C. Wildlife habitat is destroyed – which favors only one species of wildlife.
 - D. The harvesting of trees created new openings where no trees will grow to become the next forest.
 - E. None of the above
25. This area at one time was the natural drainage for the Chippewa Valley. The actual drainage name is Hubbard Creek. This area flooded on a regular basis before the dam was constructed by the US Army Corp of Engineers. How did the construction of the dam affect human society?
- A. The flood control of the drainage increased the quality of life by providing a recreational outlet to human society that does not have their own natural area to call home.
 - B. The construction of the dam controlled the flooding of the area which allowed for greater use of the surrounding countryside for agriculture purposes.
 - C. The construction of the dam created the lake which provided aquatic habitat for ducks, fish, and other wildlife at the same time allowing the area to be used for recreational hiking, fishing, and bird watching.
 - D. All of the above
 - E. None of the above
26. What are the three primary elements that all trees need to grow and survive?
- A. Lime, magnesium, and potassium
 - B. Calcium, iron, and magnesium
 - C. Phosphorous, iron, and magnesium
 - D. Nitrogen, calcium, and potassium
 - E. Nitrogen, potassium, and phosphorous
27. The standard terminology used in forestry to describe individual tree crown relationships is?
- A. Large, small, wide, narrow
 - B. Dominant, Co-dominant, intermediate, and suppressed
 - C. Seedling, Sapling, poles, saw timber
 - D. A & B
 - E. None of the above
28. The following equation represents photosynthesis: $6H_2O + 6CO_2 = C_6H_{12}O_6 + 6O_2$ what does the $C_6H_{12}O_6$ represent in this equation?
- A. Water
 - B. Glucose
 - C. Fructose
 - D. Oxygen
 - E. Carbon Dioxide

29. What are some of the by-products a forest generates?
- A. Clean air and water
 - B. Food and shelter for wildlife
 - C. Lumber
 - D. Educational opportunities
 - E. All of the above
30. If a surrounding forest is harvested at some time, we have to
- A. Re-plant the forest
 - B. Wait for the next generation of seedlings/saplings
 - C. Wait for the stumps to re-sprout from where they were cut
 - D. All of the above
 - E. B & C

TREE SCALE

DIA. 4'-6" ABOVE GROUND INCHES	DOYLE LOG RULE							
	NUMBER OF 16 FOOT LOGS IN TREE							
	½	1	1½	2	2½	3	3½	4
	CONTENTS IN BOARD FEET							
12	20	30	40	50	60			
14	30	50	70	80	90	100		
16	40	70	100	120	140	160	180	190
18	60	100	130	160	200	220	240	260
20	80	130	180	220	260	300	320	360
22	100	170	230	280	340	380	420	460
24	130	220	290	360	430	480	540	600
26	160	260	360	440	520	590	660	740
28	190	320	430	520	620	710	800	880
30	230	380	510	630	740	840	940	1040
32	270	440	590	730	860	990	1120	1220
34	300	510	680	850	1000	1140	1300	1440
36	350	580	780	970	1140	1310	1480	1640
38	390	660	880	1100	1290	1480	1680	1860
40	430	740	990	1230	1450	1660	1880	2080
42	470	830	1100	1370	1620	1860	2100	2320

TREE SCALE

DIA. 4'-6" ABOVE GROUND INCHES	INTERNATIONAL ¼ INCH LOG RULE							
	NUMBER OF 16 FOOT LOGS IN TREE							
	½	1	1½	2	2½	3	3½	4
	CONTENTS IN BOARD FEET							
12	30	60	80	100	120			
14	40	80	110	140	160	180		
16	60	100	150	180	210	250	280	310
18	70	140	190	240	280	320	360	400
20	90	170	240	300	350	400	450	500
22	110	210	280	360	430	490	560	610
24	130	250	350	430	510	590	660	740
26	160	300	410	510	600	700	790	880
28	180	350	480	600	700	810	920	1020
30	220	410	550	690	810	930	1060	1180
32	260	470	640	790	940	1080	1220	1360
34	290	530	730	900	1060	1220	1380	1540
36	330	600	820	1010	1200	1380	1560	1740
38	370	670	910	1130	1340	1540	1740	1940
40	420	740	1010	1250	1480	1700	1920	2160
42	460	820	1100	1360	1610	1870	2120	2360