

Arboriculture 101 – Quiz Questions

1. When trying to identify as to species a deciduous, broadleaf tree, one of the first things to look for is whether the tree:
 - a. Is evergreen or not
 - b. Has opposite versus alternate leaves
 - c. Is short or tall
 - d. Has flower buds of a specific color
 - e. Has ridge-like bark

2. Which of the following is true:
 - a. Insects that feed on trees usually feed on a specific part of the tree
 - b. Insects that feed on trees are normally green in color
 - c. Insects that feed on trees can be expected to switch to other trees when the availability of the tree they are feeding on runs low
 - d. Insects that feed on trees have chewing mouth parts
 - e. Adult insects are the part of the insect life cycle that causes the most direct harm to the tree

3. Which of the following trees is not considered to be a native species in Connecticut:
 - a. Green Ash
 - b. Scarlet Oak
 - c. Eastern White Pine
 - d. Atlantic White Cedar
 - e. Crimson King Maple

4. Moving from the outside of the tree inward through the trunk, which of the following is the correct order of tree tissues:
 - a. Inner bark, outer bark, xylem, phloem, pith
 - b. Outer bark, inner bark, xylem, cambium, pith
 - c. Outer bark, inner bark, cambium, phloem, pith
 - d. Outer bark, inner bark, cambium, wood, pith
 - e. Outer bark, xylem, cambium, phloem, pith

5. In an integrated pest management program, the most important thing to do is:
 - a. Never use any pesticides
 - b. Only use organic pesticides
 - c. Allow the calendar to guide your pesticide use decisions
 - d. Know your plants and know your pests before making a decision
 - e. Ask your clients what they would do

6. When applying an insecticide by means of a spray application, a good rule to keep in mind is:
 - a. Pollinators are usually a problem to the tree
 - b. It is best to avoid applying insecticides while trees are in blossom**
 - c. More is always better
 - d. If it is sprayed on, it can be washed off
 - e. It is not necessary to get full coverage to do a good job

7. In the soil triangle, the three corners are:
 - a. Moisture, organic content and mineral component
 - b. Air, water, solid component
 - c. Sand, silt, clay
 - d. Sand, silt, clay**
 - e. Sand, loam, clay

8. Which of the following is true about photosynthesis?
 - a. It needs oxygen to supply it with energy
 - b. It only happens in the leaves
 - c. It can happen in the dark
 - d. It is more important in oaks than it is in pines
 - e. It is a key reason why trees are so competitive**

9. It is important to know how individual kinds of trees are different, so that you can:
 - a. Have a better understanding of the insects and diseases that tree is prone to
 - b. Better match a tree to its needs in terms of soil and light
 - c. Predict how what a tree will look like during the course of the seasons
 - d. Plant the right tree in the right place
 - e. All of the above**

10. Which of the following symptoms might indicate a girdling root?
 - a. Copious sap flow from a wound
 - b. Stunted branches lower down on the tree
 - c. A tree flat on one side as its trunk goes into the ground**
 - d. Bulging growth just above a constriction on the trunk
 - e. Deformed leaves

11. A series of small holes in a horizontal line on the trunk of a tree is good indicator of:
 - a. Shothole disease
 - b. Sapsucker damage**
 - c. Trunk boring insects
 - d. Asian longhorned beetle
 - e. Emerald ash borer

12. Cation Exchange Capacity is:

- a. A major safety concern in tree care
- b. The reason that photosynthesis works
- c. A serious problem in oaks
- d. **An important characteristic in soil chemistry**
- e. The reason why certain pesticides should not be mixed together

13. Pine trees are:

- a. **Reliably identifiable by their needles**
- b. Similar to spruce trees in terms of the shape of their needles
- c. Closely related to hollies and rhododendrons
- d. Should never be planted by the shore
- e. Have branches that handle snow well

14. Oak trees are:

- a. The largest trees in Connecticut
- b. Resistant to cankers
- c. Do not get attacked by the two-lined chestnut borer
- d. Generally dioecious
- e. **Generally monoecious**

15. Water tends to run more quickly through sandy soils than clayey soils because of:

- a. Capillary action
- b. Cation exchange capacity
- c. **Gravity and pore space size**
- d. Clays are water repellent
- e. Sandy soils are like a sponge

16. When a tree is struck by lightning:

- a. The tree is seldom damaged
- b. The damage to the tree is almost always immediately obvious
- c. **The lightning sometimes causes damage that cannot be seen right away**
- d. The most severe damage can be expected to be in the roots
- e. The most severe damage can be expected to be in the bark

17. The phloem of the tree:

- a. Is found next to the xylem of the tree
- b. Is most important for its role in reproduction, as part of the flower
- c. **Can be seriously damaged when a tree is girdled**
- d. Is the main part of the tree that leaf miners feed on
- e. Is the part of the tree that grows wood to the inside and bark to the outside

18. Soil pH:

- a. Can be an important factor in tree health
- b. Is measured on a scale of 1 to 14
- c. Is a way to measure the phosphorous in the soil
- d. Both answers a & b are correct
- e. Answers a, b & c are all correct

19. A canker, when used in connection with a tree disease, is a:

- a. Growth on the trunk of a tree, sometimes called a knot
- b. A very serious form of verticillium
- c. A blockage of the tree's vascular system
- d. A localized degradation of the tree's bark
- e. Small growths on the tree's twigs and leaves

20. A tree's health, as seen in its leaf color and growth, is a reliable measure of a tree's structural stability

- a. This statement is true, because a fast-growing tree is always a strong tree
- b. This statement is false, because trees that have branches that grow too long are likely to tip over
- c. This statement is true, because a tree with good leaf color and growth is one that is growing on good soil
- d. This statement is false, because even a tree with good growth and leaf color may have hidden defects and decay
- e. This statement is true, because a healthy tree is a structurally strong tree, and vice versa

21. One potential cultural treatment for dealing with tree disease is to:

- a. Apply herbicides around the base of the tree to keep down weeds
- b. Properly prune a tree to encourage good air circulation through the crown
- c. Remove insect egg masses after a thorough inspection of the tree
- d. Water the tree thoroughly on a daily basis
- e. Prune back the roots to keep them from invading the lawn

22. Which of the following trees meets this description: a tall, often straight tree with capped, striped fruit and with an alternate leaf and twig pattern and pointed-lobed leaves?

- a. Black cherry
- b. Red maple
- c. Sugar maple
- d. American holly
- e. Pin oak

23. Dutch elm disease and verticillium wilt have which of the following in common?
- Both are spread by insects
 - Both attack a wide range of trees, of many different genera
 - Both can spread rapidly through the tree, through the vascular system**
 - Both cause a discoloring of the heartwood of the tree
 - Neither have treatments available to control or prevent their occurrence
24. American dogwood is called an understory tree because:
- It is a small tree that does not dominate in the landscape
 - It often grows well in partial shade and, in the woods, often grows underneath taller trees**
 - Big things can be expected from small trees
 - It has few insects or diseases that affect it
 - A tree that is its relative, the kousa dogwood, has much more pronounced flowering
25. A hydraulic sprayer, for applying pesticides
- Should never be set for more than 200 psi
 - Can harm a tree if not used properly**
 - Are best when used along with a trunk injection method
 - Should not be used to apply horticultural oils
 - Are most often filled using a hose that runs from a water supply directly into the mixing tank
26. The eastern tent caterpillar
- Is known for its ugly, fall nests
 - Is not found in western Connecticut
 - Can be distinguished from the gypsy moth because the eastern tent caterpillar has double line of blue dots and then red dots along its back
 - Can be distinguished from the gypsy moth because the eastern tent caterpillar has a distinct white line down the middle of its back**
 - Can be readily controlled using mancozeb
27. How far out from the base of a tree does the root system typically run?
- To the dripline
 - 1.5 times the diameter of the tree, once you convert diameter in inches to radius in feet
 - Until it meets competition from other trees
 - Much further than the height of the tree
 - It depends upon many factors, include soil composition and fertility, moisture availability and the health of the tree itself**

28. Which of the following describes a compound leaf?
- A leaf with two petioles
 - A leaf with open stomates
 - A leaf with several leaflets, such as a leaf of an ash tree or a horsechestnut
 - A set of leaves bundled together, like those of a pine tree
 - The various shapes of the leaves on a tree like a sassafras
29. The largest tree in Connecticut is:
- The Dutch Elm
 - An American sycamore
 - The Charter Oak
 - The Pin Oak
 - The Gifford Pinchot Pine Tree
30. Which of the following terms refers to the growth area of a tree?
- Internode
 - Meristem
 - Xylem
 - Phloem
 - Trunk flare
31. Which of the following is not a function performed by the bark of a tree
- Insulation
 - Prevention of moisture loss
 - Protection against insects and disease
 - Growth of new wood and xylem cells
 - Growth of new outer bark through the cork cambium
32. Which of the following play a direct, active role in transpiration?
- The stomates
 - The cambium
 - The root cap
 - The heart wood
 - The pith
33. Which of the following parts of a tree play a direct, active role in the movement of sugar-enriched sap throughout the tree?
- The root hairs
 - The cambium
 - The phloem
 - The heart wood
 - The growth rings

34. Which of the following types of organisms cause diseases in trees?
- The bacteria
 - The fungi
 - Nematodes
 - Phytoplasms
 - All of the above
35. When determining whether or not to apply a fertilizer to a tree, one should:
- Look closely at the tree for signs on nutrient deficiencies
 - Sample the sap of a tree for nutrient content
 - Take a soil sample in for evaluation
 - Choice A and C
 - Choice A, B and C
36. When assessing a mature tree that is exhibiting stress, why might it be helpful to discuss with the client the past history of the tree?
- One needs to assess the client's ability to pay
 - The tree may have been injured by construction activity or trenching near the tree
 - It gives you time to come up with a good answer
 - To give the client perspective, as you help them realize that he or she might be losing that tree
 - You have someone to blame if your treatment does not work
37. With scale insects and also the hemlock woolly adelgid, in which stage of the insect's life cycle is the insect most vulnerable to treatment with horticultural oil?
- Mature stage
 - Crawler stage
 - Egg stage
 - Reproductive stage
 - Summer
38. When looking at a bag of fertilizer, what does NPK stand for?
- Nitrogen, Phosphorous, Krypton
 - Ammonium, Potassium, Calcium
 - Nitrogen, Phosphorous, Potassium
 - Ammonium, Potash, Calcite
 - Nitrogen, Potassium, Calcium

39. We get a week of bright sunny days in February in which the air temperature goes above freezing while the ground remains frozen. What might you expect?
- a. Deformed leaves on an oak tree
 - b. A superior fruit crop come summer
 - c. Severe root damage on native trees
 - d. Dried out foliage on certain evergreen plants
 - e. Root swelling at the soil line
40. Which tree might you recommend to someone who wants a shade tree, doesn't want a conifer, doesn't want nuts or messy fruits and wants it to grow near a pond?
- a. White oak
 - b. Red mulberry
 - c. Eastern white pine
 - d. Flowering cherry
 - e. Black gum (Pepperidge)