

## Grower Practice Exam

- 1) The basic living unit of the plant is the \_\_\_\_\_.
  - A) Cell
  - B) Root
  - C) Shoot
  - D) Tissue
  
- 2) The above ground part of the plant is referred to as the \_\_\_\_\_.
  - A) Woody system
  - B) Shoot system
  - C) Root system
  - D) All of the above
  
- 3) If a part of the root or shoot system is damaged, the entire plant may be affected.
  - A) TRUE
  - B) FALSE
  
- 4) The element \_\_\_\_\_ is important in the production of chlorophyll in the leaf.
  - A) Chlorine
  - B) Nitrogen
  - C) Iron
  - D) Carbon monoxide
  
- 5) The green leaves are essential in the manufacture of foods used by other parts of the plant.
  - A) TRUE
  - B) FALSE
  
- 6) Through what process are plants able to use sugars and other compounds as energy sources?
  - A) Transpiration
  - B) Photosynthesis
  - C) Respiration
  - D) Translocation
  
- 7) The distribution of the veins in the leaves is not a factor used in the identification of plant species.
  - A) TRUE
  - B) FALSE
  
- 8) Plants with two seed leaves during the seeding stage of development are referred to as \_\_\_\_\_.
  - A) Bi-leaved
  - B) Monocotyledons
  - C) Dicotyledons
  - D) Simple leaved seedling
  
- 9) Most leaves are attached to the stem by a petiole, which consists primarily of \_\_\_\_\_.

**© 2007, The Ohio Nursery & Landscape Association**

The Ohio Certified Nursery Technician program is wholly owned by The Ohio Nursery & Landscape Association. No parts of this document may be reproduced, plagiarized, or distributed without express written permission of the ONLA. Questions? Call (800) 825-5062.

- A) Meristemic tissue
  - B) Vascular tissue
  - C) Xylem tissue
  - D) Phloem tissue
- 10) The form of the blade of the leaf is of two types; simple or compound.
- A) TRUE
  - B) FALSE
- 11) Linden and oak trees are examples of trees which their leaf forms are considered \_\_\_\_\_.
- A) Monocot
  - B) Simple
  - C) Compound
  - D) Conspicuous
- 12) The blade of a compound leaf is composed of a number of separate leaflets.
- A) TRUE
  - B) FALSE
- 13) The primary functional cell types in the leaf are \_\_\_\_\_.
- A) Spongy mesophyll cells
  - B) Guard cells
  - C) Phloem cells
  - D) Parenchyma cells
- 14) The green pigment chlorophyll is located in the epidermis layer of the leaf.
- A) TRUE
  - B) FALSE
- 15) The process of photosynthesis occurs inside the \_\_\_\_\_.
- A) Epidermis
  - B) Parenchyma
  - C) Spongy mesophyll
  - D) Stoma
- 16) What is an important by-product of photosynthesis that is critical for life on earth?
- A) CO<sub>2</sub>
  - B) H<sub>2</sub>O
  - C) O<sub>2</sub>
  - D) None of the above
- 17) As the temperature increases the rate of photosynthesis \_\_\_\_\_.
- A) increases
  - B) stays the same
  - C) decreases
  - D) stops completely
- 18) Stomates are tiny openings in the bottom of the leaves that release water as water vapor.
- A) TRUE

- B) FALSE
- 19) When transpirational water loss exceeds what the roots are able to supply, \_\_\_\_\_ occurs.  
A) Leaf drop  
B) Wilting  
C) Respiration  
D) Yellowing of the leaf
- 20) Low relative humidity causes transpiration to decrease.  
A) TRUE  
B) FALSE
- 21) All stems grow in length; stems of woody plants also grow in girth.  
A) TRUE  
B) FALSE
- 22) What vascular tissue is made up of supportive fibers, some living cells, but mostly, large cylindrical cells that have lost their contents and are hollow.  
A) Xylem  
B) Cambium  
C) Phloem  
D) Cortex
- 23) The vascular cambium is a thin layer of cells located between the \_\_\_\_\_.  
A) Epidermis and Cortex  
B) Periderm and Phloem  
C) Xylem and Heartwood  
D) Xylem and Phloem
- 24) The vascular cambium's new growth becomes new xylem tissue on the inside of the trunk and new phloem tissue on the outside.  
A) TRUE  
B) FALSE
- 25) What tissue conducts food made from photosynthesis?  
A) Periderm  
B) Cambium  
C) Phloem  
D) Xylem
- 26) All cells within the phloem are living.  
A) TRUE  
B) FALSE
- 27) What tissue within the woody stem of a plant can transport substances (food, water, minerals) in any direction throughout the plant?  
A) Xylem  
B) Vascular Cambium  
C) Periderm

- D) Phloem
- 28) Cutting a concentric ring around the trunk of a tree will eventually kill it.  
A) TRUE  
B) FALSE
- 29) In what plants are the three vascular tissues (xylem, phloem and cambium) arranged in bundles and scattered in a discontinuous vascular system throughout the stem.  
A) Dicotyledonous  
B) Woody  
C) Herbaceous  
D) Monocotyledonous
- 30) The term \_\_\_\_\_ refers to a region where a leaf or a bud is attached.  
A) Terminal bud  
B) Shoot  
C) Nodes  
D) Internodes
- 31) A region between two nodes is known as internodes.  
A) TRUE  
B) FALSE
- 32) The pattern of lateral buds and subsequent leaves along the stem is not a valuable taxonomic characteristic of different species of plants.  
A) TRUE  
B) FALSE
- 33) A shortened stem surrounded by swollen leaf bases is known as a \_\_\_\_\_.  
A) Corm  
B) Rhizome  
C) Bulb  
D) Stolon
- 34) An example of a plant grown from a corm is \_\_\_\_\_.  
A) Tulip  
B) Gladiolis  
C) Iris  
D) Grasses
- 35) A compressed stem that grows horizontally is known as \_\_\_\_\_.  
A) Rhizomes  
B) Corms  
C) Bulbs  
D) Tubers
- 36) An example of a plant grown from tubers is \_\_\_\_\_.  
A) Canna  
B) Potato  
C) Daffofil

© 2007, The Ohio Nursery & Landscape Association

The Ohio Certified Nursery Technician program is wholly owned by The Ohio Nursery & Landscape Association. No parts of this document may be reproduced, plagiarized, or distributed without express written permission of the ONLA. Questions? Call (800) 825-5062.

- D) Grasses
- 37) Above ground stems that grown horizontally are known as \_\_\_\_\_.
- A) Tubers
  - B) Rhizomes
  - C) Stolons
  - D) Corms
- 38) The root system's primary functions are anchoring the plant and absorbing water and minerals.
- A) TRUE
  - B) FALSE
- 39) A plant with a \_\_\_\_\_ root system is easier to transplant.
- A) Tap
  - B) Fibrous
  - C) Advantageous
  - D) All of the above
- 40) A tap root system consists of many long multibranched roots that are slender and fiber like.
- A) TRUE
  - B) FALSE
- 41) Which type of root is the most active in water and nutrient absorption.
- A) Multibranched
  - B) Fibrous
  - C) Feeder
  - D) Tap
- 42) Feeder roots don not extend beyond the drip line of an established tree or shrub.
- A) TRUE
  - B) FALSE
- 43) For respiration, plants require what two things to survive?
- A) Air & water
  - B) Water & minerals
  - C) Water & soil
  - D) Carbon monoxide & water
- 44) Roots that form from stem or leaf tissue are known as \_\_\_\_\_.
- A) Fibrous roots
  - B) Fungus roots
  - C) Adventitious roots
  - D) Mycorrhizae roots
- 45) Perpetuation of the species is the primary function of the flower.
- A) TRUE
  - B) FALSE

- 46) The typical flower is composed of four whorls of modified leaves: the sepals, petals, stamens, and pistils. All of these parts are attached to and supported by the \_\_\_\_\_.  
A) Filament  
B) Pedicel  
C) Stigma  
D) Receptacle
- 47) The \_\_\_\_\_ are the male parts of the flower.  
A) Ovule  
B) Stigma  
C) Filament  
D) Stamen
- 48) Within the petals of a flower, there are one or more sets of stamens.  
A) TRUE  
B) FALSE
- 49) The \_\_\_\_\_ consists of the ovary containing fertile eggs and the style, a long slender stalk supporting the stigma.  
A) Receptacle  
B) Pistil  
C) Pedicel  
D) Anthers
- 50) The pistil(s) are the female parts of the flower.  
A) TRUE  
B) FALSE
- 51) A plant species that may have only male or female flowers are said to be dioecious.  
A) TRUE  
B) FALSE
- 52) The term dioecious means \_\_\_\_\_.  
A) Two seed leaves  
B) One house  
C) Two houses  
D) One seed leaf
- 53) In the production of fruit, some varieties need cross-pollination.  
A) TRUE  
B) FALSE
- 54) All plants exhibit one of three basic life cycles. Which selection below is not one of the three?  
A) Annual  
B) Biennial  
C) Triennial  
D) Perennial
- 55) An annual plant completes its life cycle in two years.

© 2007, The Ohio Nursery & Landscape Association

The Ohio Certified Nursery Technician program is wholly owned by The Ohio Nursery & Landscape Association. No parts of this document may be reproduced, plagiarized, or distributed without express written permission of the ONLA. Questions? Call (800) 825-5062.

- A) TRUE  
B) FALSE
- 56) A biennial plant grows vegetatively, forming a rosette of leaves in the first year and does not produce sex organs in this season.  
A) TRUE  
B) FALSE
- 57) Herbaceous perennials have woody stems that die back in the fall and resume growth in the spring from woody roots and stems.  
A) TRUE  
B) FALSE
- 58) All growth in the plant body involves an increase in the number of cells. The tissue where this is located is called the \_\_\_\_\_.  
A) Root system  
B) Shoot system  
C) Vascular cambium  
D) Meristem
- 59) The vascular cambium, the root apex, and the marginal meristems are active during the growth \_\_\_\_\_.  
A) in spring  
B) of leaves  
C) of the roots  
D) in summer
- 60) The main shoot and lateral shoots are the main meristemic regions of a woody plant.  
A) TRUE  
B) FALSE
- 61) The vascular cambium not only increases the diameter of the tree trunk, but also is responsible for \_\_\_\_\_.  
A) Creation of new phloem  
A) Wound closure  
B) Transport food from photosynthesis  
C) All of the above
- 62) Auxins are chemical hormones produced in actively growing \_\_\_\_\_.  
A) Roots  
B) Apical meristems  
C) Lateral buds  
D) Bulbs
- 63) Removal of the stem apex removes the supplier of \_\_\_\_\_ in the stem.  
A) Gibberlins  
B) Cytokinins  
C) Absciscic acid  
D) Auxin

© 2007, The Ohio Nursery & Landscape Association

The Ohio Certified Nursery Technician program is wholly owned by The Ohio Nursery & Landscape Association. No parts of this document may be reproduced, plagiarized, or distributed without express written permission of the ONLA. Questions? Call (800) 825-5062.

- 64) The hormone primarily responsible in promoting cell division is \_\_\_\_\_.
- A) Gibberlins
  - B) Auxins
  - C) Absciscic acid
  - D) Cytokinins
- 65) Cytokinins are produced in the \_\_\_\_\_.
- A) Leaves
  - B) Shoot
  - C) Phloem
  - D) Roots
- 66) The bolting response (rapid elongation of the flower stalk) of spinach, cabbage, and some biennial herbaceous plants has been shown to be due to a rapid increase in the \_\_\_\_\_ content of the stem.
- A) Auxin
  - B) Cytokinin
  - C) Absciscic acid
  - D) Gibberlin
- 67) Soaking seeds in gibberlin-containing solution has proven to stimulate seed germination.
- A) TRUE
  - B) FALSE
- 68) Some plant growth regulators behave as inhibitors rather than promoters of growth. Two of these inhibitors are \_\_\_\_\_.
- A) Cytokinins & Auxins
  - B) Absciscic acid & Ethylene
  - C) Magnesium & Chlorine
  - D) Nitrogen & Potassium
- 69) This chemical is produced by ripening fruits such as apples and rapidly increases the rate of ripening or senescence.
- A) Absciscic acid
  - B) Auxins
  - C) Ethylene
  - D) None of the above
- 70) Auxins such as IBA (Indolebutyric acids) are very important in plant propagation for \_\_\_\_\_.
- A) Sterilizing equipment
  - B) Rooting of cuttings
  - C) Growth regulation
  - D) Pest control
- 71) Plant hardiness refers to the ability of the plant to over winter and produce new growth annually.
- A) TRUE
  - B) FALSE

- 72) Two USDA hardiness zones are represented in Ohio. The Cincinnati and Lake Erie areas are in Zone 6. Columbus is in Zone \_\_\_\_\_.
- A) 4
  - B) 5
  - C) 6
  - D) 7
- 73) \_\_\_\_\_ is the process by which a plant stops active growth and develops the capacity to survive freezing temperatures.
- A) Winter hardiness
  - B) Photoperiodism
  - C) Cold acclimation
  - D) Hardiness
- 74) Evergreen trees and shrubs do not undergo a process of cold acclimation.
- A) TRUE
  - B) FALSE
- 75) Plants are classified in a hierarchical system. The first and most important is \_\_\_\_\_.
- A) Genus
  - B) Class
  - C) Family
  - D) Species
- 76) A family is \_\_\_\_\_.
- A) A group of related species
  - B) A group of related families
  - C) A group of related classes
  - D) A group of related genera
- 77) The genus is a group of related species.
- A) TRUE
  - B) FALSE
- 78) The \_\_\_\_\_ is the fundamental unit by which we name all organisms on earth.
- A) Genus
  - B) Species
  - C) Specific epithet
  - D) Kingdom
- 79) A silver maple is a separate species from red maples.
- A) TRUE
  - B) FALSE
- 80) The Latin binomial system was developed by Michael Dirr.
- A) TRUE
  - B) FALSE

- 81) According to the international Code of Botanical Nomenclature, which of the following is true about the Latin name of a plant when used in print?
- A) Either italicized or underlined
  - B) The first letter of the genus is capitalized
  - C) The first letter of the specific epithet is not capitalized
  - D) All of the above
- 82) Which of the below is correct in the Latin binomial naming system?
- A) Acer Rubrum
  - B) Acer *Rubrum*
  - C) *Acer rubrum*
  - D) All of the above
- 83) The Swedish botanist and naturalist who refined the Latin system of naming plants is \_\_\_\_\_.
- A) Michael Dirr
  - B) Venturia Inaequalis
  - C) Linnaeus
  - D) Hortus III
- 84) Moss rose, Rose of Sharon, Lenton rose, and Hairy alpine are all in the genus *Rosa* and the family Rosaceae.
- A) TRUE
  - B) FALSE
- 85) Which of the Red Maples listed below will not do well in a fairly wet sunny site?
- A) Acer Rubrum
  - B) Acer Palmatum
  - C) Acer Platanoides
  - D) All of the above
- 86) The International Code of Botanical Nomenclature governs botanical varieties.
- A) TRUE
  - B) FALSE
- 87) A \_\_\_\_\_ can be defined as a subgrouping within a species that has inheritable differences from the straight species.
- A) Cultivar
  - B) Botanical variety
  - C) Hybrid
  - D) All of the above
- 88) \_\_\_\_\_ is termed as an assemblage of cultivated plants which is clearly distinguished by any characteristics and which when reproduced (sexually or asexually) retains its distinguishing characteristics.
- A) Botanical variety
  - B) Cultivated variety
  - C) Hybrids
  - D) Species

- 89) Cultivated varieties are governed by \_\_\_\_\_.
- A) International Code of Nomenclature for cultivated plants
  - B) International Code of Botanical Nomenclature
  - C) American Standards for nursery stock
  - D) United States Department of Agriculture
- 90) Cultivars are generally indicated either by putting the cultivar name in single quotation marks or by using the abbreviation “cv” before the cultivar name.
- A) TRUE
  - B) FALSE
- 91) The hybrid name is designated by italics for first and second parts of the Latin binomial with an unitalicized \_\_\_\_\_ in between to designate the cross.
- A) cv
  - B) H
  - C) x
  - D) None of the above
- 92) Plant patents last 17 years.
- A) TRUE
  - B) FALSE
- 93) Trade marks are made not for the plants germplasm itself, but rather for the name.
- A) TRUE
  - B) FALSE
- 94) After a plant patent has expired, you can propagate the plant and sell it under its trademark name without permission or having to pay royalties.
- A) TRUE
  - B) FALSE
- 95) The bacterium *Erwinia amylovora* occurs only on plants in the rose family. This bacterium's common name is \_\_\_\_\_.
- A) Apple scab
  - B) Bacterial fire blight
  - C) Anthracnose
  - D) Guignardia leaf blotch
- 96) Which of the following is a plant species?
- A) *Pyrus*
  - B) *Calleryana*
  - C) *Pyrus Calleryana*
  - D) Rosaceae
- 97) Which of the following is the smallest cranberry bush *Viburnum*?
- A) *Viburnum opulus* ‘Nanum’
  - B) *Viburnum opulus* ‘Compactum’
  - C) *Viburnum opulus*
  - D) *Viburnum plicatum* var. *tomentosum* ‘Shasta’

- 98) Acer Saccharum is one of the many red maples.  
A) TRUE  
B) FALSE
- 99) Symptoms of this disease include blighted shoots of discolored leaves that are bent at the ends in the pattern of a “shepherd’s crook”.  
A) Guignardia leaf blotch  
B) Apple scab  
C) Cedar apple rust  
D) Bacterial fireblight
- 100) Seed propagation is asexual propagation.  
A) TRUE  
B) FALSE
- 101) Vegetative propagation is also called \_\_\_\_\_.  
A) Sexual  
B) Asexual  
C) Cloning  
D) Stem cutting
- 102) Cutting propagation, grafting and budding, division and tissue culture are methods of \_\_\_\_\_ propagation.  
A) Sexual  
B) Asexual  
C) Seeding  
D) None of the above
- 103) The most common form of asexual propagation is \_\_\_\_\_.  
A) Cutting propagation  
B) Tissue culture  
C) Grafting and budding  
D) Division
- 104) Stem cuttings are taken from what is called a mother or stock plant.  
A) TRUE  
B) FALSE
- 105) Soft wood cuttings are taken when the plant is dormant and the cuttings are of the previous season’s growth.  
A) TRUE  
B) FALSE
- 106) Hardwood cuttings are taken during \_\_\_\_\_.  
A) The spring season  
B) The summer season  
C) The fall season  
D) The dormant season
- 107) Semi-hard cuttings are taken from the previous season’s growth.

© 2007, The Ohio Nursery & Landscape Association

The Ohio Certified Nursery Technician program is wholly owned by The Ohio Nursery & Landscape Association. No parts of this document may be reproduced, plagiarized, or distributed without express written permission of the ONLA. Questions? Call (800) 825-5062.

- A) TRUE
  - B) FALSE
- 108) Stem cuttings are typically \_\_\_\_\_ inches in length.
- A) 1-2
  - B) 2-3
  - C) 3-5
  - D) 2-4
- 109) Cuttings taken from the tip of the stock plant are called Basal cuttings.
- A) TRUE
  - B) FALSE
- 110) When making a cut, you should do it \_\_\_\_\_ because roots will form more readily at this location of the stem.
- A) Above the node
  - B) Just below the node
  - C) Tight above the roots
  - D) None of the above
- 111) Plants propagated through seed generally are genetically identical.
- A) TRUE
  - B) FALSE
- 112) To help seed break dormancy, you can soak it in 180 degree F water for three hours.
- A) TRUE
  - B) FALSE
- 113) Most evergreen (narrowleaf) seedlings are grown for \_\_\_\_\_ and obtain 3 to 12 inches in size before harvesting.
- A) 1-2 years
  - B) 2-3 years
  - C) 1 year
  - D) 4 years
- 114) Grafting is an asexual propagation technique in which two separate pieces of plant material: a root stock & scion are joined together.
- A) TRUE
  - B) FALSE
- 115) Crabapple and domestic apple.
- A) Compatible grafting
  - B) Incompatible grafting
- 116) Blue spruce on Juniper.
- A) Compatible grafting
  - B) Incompatible grafting
- 117) When grafting, what cell layer is most important and should “line up and match”?
- A) Heartwood/Pith

© 2007, The Ohio Nursery & Landscape Association

The Ohio Certified Nursery Technician program is wholly owned by The Ohio Nursery & Landscape Association. No parts of this document may be reproduced, plagiarized, or distributed without express written permission of the ONLA. Questions? Call (800) 825-5062.

- B) Xylem
  - C) Cambium
  - D) Phloem
- 118) \_\_\_\_\_ is a process of combining a dormant scion onto a root section of a desired root stock. Matching cuts two inches in length are made on both scion and root stock.
- A) Whip and tongue
  - B) Root grafting
  - C) Side veneer grafting
  - D) None of the above
- 119) A graft union that looks like a long Z is known as root grafting.
- A) TRUE
  - B) FALSE
- 120) The most common method of grafting is \_\_\_\_\_.
- A) Root grafting
  - B) Whip and tongue
  - C) Side veneer grafting
  - D) None of the above
- 121) Budding is a(n) \_\_\_\_\_ technique for propagating selected cultivars of shade and ornamental trees.
- A) Asexual
  - B) Sexual
  - C) Bi-sexual
  - D) None of the above
- 122) Spring chip budding is done while the stock plant is in active growth.
- A) TRUE
  - B) FALSE
- 123) Summer budwood is collected from \_\_\_\_\_.
- A) Previous season's growth
  - B) Current season's growth
  - C) Both A & B
  - D) None of the above
- 124) When removing leaf blades from budsticks, the petiole of the leaf should be cut \_\_\_\_\_ inch above the blade.
- A) 1/16
  - B) 1/8
  - C) ¼
  - D) ½
- 125) Budsticks cannot be stored and used later; they must be propagated promptly.
- A) TRUE
  - B) FALSE
- 126) The root stock seeding to be used for budding should have a tap root system.

© 2007, The Ohio Nursery & Landscape Association

The Ohio Certified Nursery Technician program is wholly owned by The Ohio Nursery & Landscape Association. No parts of this document may be reproduced, plagiarized, or distributed without express written permission of the ONLA. Questions? Call (800) 825-5062.

- A) TRUE  
B) FALSE
- 127) “Hilled” refers to piling in soil in a small hill around the base of the root stock.  
A) TRUE  
B) FALSE
- 128) \_\_\_\_\_ is the most common technique of budding ornamental plants.  
A) Chip budding  
B) T-budding  
C) Flower budding  
D) None of the above
- 129) In T-budding, the “shield” is removed from the stock plant by making \_\_\_\_\_ cuts.  
A) One  
B) Two  
C) Three  
D) Four
- 130) The length of the cut made in the plant receiving the shield should be  $\frac{1}{4}$  inch longer than the shield.  
A) TRUE  
B) FALSE
- 131) The shield should be \_\_\_\_\_ inches in length.  
A)  $\frac{1}{4}$ -  $\frac{1}{2}$   
B) 1- 2  
C)  $\frac{1}{2}$ -  $\frac{3}{4}$   
D)  $\frac{3}{4}$ - 1
- 132) In chip budding, two cuts are made to remove the bud. The first made just below the bud at a \_\_\_\_\_ degree angle.  
A) 25  
B) 45  
C) 60  
D) 90
- 133) A T-Bud usually calluses in \_\_\_\_\_.  
A) 1-2 weeks  
B) 2-3 weeks  
C) 4-5 weeks  
D) 5-6 weeks
- 134) Narrowleaf evergreen trees grow best in wet bottom-land soils.  
A) TRUE  
B) FALSE
- 135) Which of the following would be considered to be the “logistics” in field production of narrowleaf evergreen trees?  
A) Water source, quantity/quality

© 2007, The Ohio Nursery & Landscape Association

The Ohio Certified Nursery Technician program is wholly owned by The Ohio Nursery & Landscape Association. No parts of this document may be reproduced, plagiarized, or distributed without express written permission of the ONLA. Questions? Call (800) 825-5062.

- B) Vehicle access
  - C) Convenient location for harvesting equipment access to field
  - D) All of the above
- 136) During the liner phase of narrowleaf evergreens, the liners should be root pruned at least once during production.
- A) TRUE
  - B) FALSE
- 137) In grading narrowleaf evergreen trees, they are graded by two numbers (ex. 2-2). These numbers mean: 2 years seed bed and 2 years transplant bed.
- A) TRUE
  - B) FALSE
- 138) The term “plug plus one” hemlock is less than \_\_\_\_\_ years old.
- A) 1
  - B) 2
  - C) 3
  - D) 4
- 139) The most notable problem in the production of narrowleaf evergreen trees is insects.
- A) TRUE
  - B) FALSE
- 140) White pine grown for Christmas trees requires tight sheering during production.
- A) TRUE
  - B) FALSE
- 141) Softwood cutting is the primary propagation technique used in deciduous shrub production.
- A) TRUE
  - B) FALSE
- 142) A pH of \_\_\_\_\_ is preferred in the production of deciduous shrubs.
- A) 5.0-6.0
  - B) 6.0-6.5
  - C) 6.5-7.0
  - D) 7.0-7.5
- 143) In the second year of production of deciduous shrubs, they are pruned \_\_\_\_\_.
- A) Once
  - B) Twice
  - C) Three times
  - D) Not at all
- 144) Identifying a plant material market is a preliminary decision that a nursery owner needs to make before beginning tree-production. The two most basic markets are \_\_\_\_\_. (select two)
- A) Ball and burlap
  - B) Retail

© 2007, The Ohio Nursery & Landscape Association

The Ohio Certified Nursery Technician program is wholly owned by The Ohio Nursery & Landscape Association. No parts of this document may be reproduced, plagiarized, or distributed without express written permission of the ONLA. Questions? Call (800) 825-5062.

- C) Design-build market
  - D) Bare root
- 145) The design-build market typically desires trees with a \_\_\_\_\_ inch caliper.
- A) 1 –1 ½
  - B) 2- 2 ½
  - C) 2 ½ - 4
  - D) 3 – 3 ½
- 146) January and February are the two months of the year that wholesale nurseries usually receive bare-root tree liners from West Coast suppliers.
- A) TRUE
  - B) FALSE
- 147) In field production of trees, pesticide application usually begins in \_\_\_\_\_.
- A) April
  - B) March
  - C) May
  - D) June
- 148) In what season are shade and ornamental tree’s field inventories taken and compiled and graded either by height or caliper?
- A) Spring
  - B) Summer
  - C) Fall
  - D) Winter
- 149) The fact that plants grown in containers are placed above ground and must be monitored for water and nutrient needs is considered to be a disadvantage of growing containerized plants.
- A) TRUE
  - B) FALSE
- 150) Growing plants in containers allows for \_\_\_\_\_.
- A) spacing advantages
  - B) unlimited selling season
  - C) required less space than B&B stock
  - D) all of the above
- 151) \_\_\_\_\_ refers to the placement of container plants on the growing pad or standing ground according to immediate needs.
- A) Categorization
  - B) Stocking
  - C) Placement
  - D) Staging
- 152) Spacing does not affect the future growth of containerized plants.
- A) TRUE
  - B) FALSE

- 153) Spacing patterns are usually rectangular or diagonal.  
A) TRUE  
B) FALSE
- 154) Many plastic container styles have a rim at the top denote the \_\_\_\_\_.  
A) water filling point  
B) design to trademark of company  
C) media fill line  
D) nothing- only pot design
- 155) When watering plants in containers, you should \_\_\_\_\_.  
A) fill to surface of pot rim  
B) fill once and when drained, re-water again  
C) water very lightly, not filling to the rim  
D) leech with water three times per watering
- 156) When growing plants in containers in a nursery, you should always use a soil-less media.  
A) TRUE  
B) FALSE
- 157) The most common form of protection for containerized plants for over-wintering is \_\_\_\_\_.  
A) Greenhouse (heated)  
B) Burying pots in ground or mulch  
C) Unheated polyhouse  
D) Heeling pots into a field bed
- 158) A problem created by the sun in polyhouses in the winter is \_\_\_\_\_.  
A) Excessive heat build up  
B) Drying of soil media  
C) Promoted growth of molds  
D) All of the above
- 159) Overwintering polyhouses for containers do not require venting on sunny days.  
A) TRUE  
B) FALSE
- 160) Prevention spray of fungicides is an essential treatment to use on containers just prior to storage in polyhouse.  
A) TRUE  
B) FALSE
- 161) The term “plugs” refers to \_\_\_\_\_.  
A) Used to seal drain holes in containers.  
B) Pre-grown seedlings  
C) A horticulturist who seeds and transplants  
D) Peat pots
- 162) Propagation of perennials is usually done \_\_\_\_\_.  
A) In summer

© 2007, The Ohio Nursery & Landscape Association

The Ohio Certified Nursery Technician program is wholly owned by The Ohio Nursery & Landscape Association. No parts of this document may be reproduced, plagiarized, or distributed without express written permission of the ONLA. Questions? Call (800) 825-5062.

- B) The year before it is to be sold
  - C) Early spring
  - D) Late winter
- 163) Smaller container sizes (ex. 4", 1 qt., 1 gal.) are used for \_\_\_\_\_.
- A) Garden center sales
  - B) Landscape contractors
  - C) Drinking containers
  - D) None of the above
- 164) Field mineral soils usually are not used as a container media because of drainage problems that can occur.
- A) TRUE
  - B) FALSE
- 165) The structureless thermal blanket technique is used primarily to \_\_\_\_\_.
- A) Protect containers from frost during early spring
  - B) Overwinter perennials in containers
  - C) Overlay pots on tables to retain moisture in winter
  - D) Wrap young trees for winter protection from the wind
- 166) When overwintering perennials, botryis control is not necessary since plants are dormant.
- A) TRUE
  - B) FALSE
- 167) Once you have uncovered overwintered perennials you should not recover them, even if cold temperatures return.
- A) TRUE
  - B) FALSE
- 168) Polyphosphate is used as a \_\_\_\_\_.
- A) Fertilizer
  - B) Additive to water to rinse iron buildup off of foliage
  - C) Bloom increasing fertilizer
  - D) Polyhut covering
- 169) Good cultural practices help maintain plant vigor.
- A) TRUE
  - B) FALSE
- 170) This pathogen causes seedlings to be girdled at the media surface.
- A) Botryis
  - B) Pythium
  - C) Anthracnose
  - D) Rhizoctonia
- 171) Botryis often appears on foliage and stems during overwintering of herbaceous perennials.
- A) TRUE
  - B) FALSE

- 172) Pesticides in general are not phototoxic, therefore they will have no effect if applied to a crop on a sunny day.  
A) TRUE  
B) FALSE
- 173) Pesticides may be applied to a blooming crop without causing damage to the flowers.  
A) TRUE  
B) FALSE
- 174) This insect is one of the most common to herbaceous perennials. It is a plant lice that is 1/16 to 1/8 inch long, yellowish-green to black in color, and is often found in clusters near elongated shoots.  
A) Thrips  
B) Scale  
C) Aphids  
D) Spider-mites
- 175) \_\_\_\_\_ are slender, wedge-shaped insects that are usually green, yellow or brown and are about ¼ of an inch in length. The sucking injury of this insect is a characteristic of a white dotted effect on the leaf surface followed by a yellowing or eventual browning.  
A) Aphids  
B) Thrips  
C) Leafhoppers  
D) Spider mites
- 176) Spider-mites are particularly troublesome in hot dry weather.  
A) TRUE  
B) FALSE
- 177) Chrysanthemum and columbine are two species that are particularly susceptible to \_\_\_\_\_.  
A) Anthracnose  
B) Leaf-miners  
C) Spider-mites  
D) Leafhoppers
- 178) \_\_\_\_\_ are insects 1/20 of an inch long. They suck sap from leaves and buds. Symptoms include flowers partially open and silvery-streaked foliage.  
A) Aphids  
B) Thrips  
C) Leaf-miners  
D) Leafhoppers
- 179) Harvesting of B&B plants can have effects on the plants' growth in the landscape.  
A) TRUE  
B) FALSE
- 180) B&B stock must be labeled with correct nomenclature and size classification.  
A) TRUE

© 2007, The Ohio Nursery & Landscape Association

The Ohio Certified Nursery Technician program is wholly owned by The Ohio Nursery & Landscape Association. No parts of this document may be reproduced, plagiarized, or distributed without express written permission of the ONLA. Questions? Call (800) 825-5062.

- B) FALSE
- 181) B&B plants should not have their branches and/or limbs bound until they are ready to be shipped to the merchant.  
A) TRUE  
B) FALSE
- 182) The American standards of nursery stock is published by \_\_\_\_\_.  
A) The International Code of Botanical varieties  
B) The US Department of Agriculture  
C) The American Association of Nurserymen  
D) The Ohio Nursery and Landscape Association
- 183) Misshapen or irregular trunks on B&B plants will require an adjustment in sizing the ball to be harvested.  
A) TRUE  
B) FALSE
- 184) The size of the earth ball on B&B plants is determined by the size of the plant. Species does not affect ball size.  
A) TRUE  
B) FALSE
- 185) The shape of the earth ball on B&B plants does not determine how well it holds together. Only firmness determines this factor.  
A) TRUE  
B) FALSE
- 186) If an earth ball begins to break apart when B&Bing stock, it is lost and cannot be saved. It must be heeled into the ground and left for future harvest.  
A) TRUE  
B) FALSE
- 187) Plastic twine and nylon are the most common twines used in securing earth balls on B&B stock.  
A) TRUE  
B) FALSE
- 188) When selecting a plot for a greenhouse, climate is a factor in this process. A site should be selected where sunlight and temperature are best suited for the crops to be grown.  
A) TRUE  
B) FALSE
- 189) The pH level of the water supply for a greenhouse should be \_\_\_\_\_.  
A) 5.0- 6.0  
B) 5.5- 6.0  
C) 6.0- 6.5  
D) 6.5- 7.0

**© 2007, The Ohio Nursery & Landscape Association**

The Ohio Certified Nursery Technician program is wholly owned by The Ohio Nursery & Landscape Association. No parts of this document may be reproduced, plagiarized, or distributed without express written permission of the ONLA. Questions? Call (800) 825-5062.

- 190) The water supply for a greenhouse crop should have an alkalinity (calcium and magnesium carbonate) level of less than \_\_\_\_ ppm.
- A) 50
  - B) 100
  - C) 150
  - D) 200
- 191) If your greenhouse is located above the fortieth parallel (Columbus, Ohio) it does not matter whether it orients north or south or east or west.
- A) TRUE
  - B) FALSE
- 192) There are two greenhouse designs that can be constructed: \_\_\_\_\_ and \_\_\_\_\_. (select two)
- A) Gothic
  - B) Single
  - C) Ridge and furrow
  - D) Quonset
- 193) Most greenhouses today are built of \_\_\_\_\_.
- A) Steel
  - B) Pluminum
  - C) Redwood
  - D) Polycarbonates
- 194) The most expensive type of greenhouse to heat is \_\_\_\_\_.
- A) Polyhouse/polyethylene covering
  - B) Acrylic
  - C) Polycarbonate
  - D) Single pane glass
- 195) Polyethylene glazing has a light transmission of approximately \_\_\_\_\_.
- A) 36%
  - B) 64%
  - C) 73%
  - D) 87%
- 196) The least expensive glazing material is \_\_\_\_\_.
- A) Glass
  - B) Polycarbonate
  - C) Acrylic
  - D) Polyethylene
- 197) Acrylic glazing has a light penetration of approximately \_\_\_\_\_.
- A) 60%
  - B) 70%
  - C) 80%
  - D) 84%

- 198) Benches made of wood that have been treated with creosote or pentachlorophenol will release vapors that are toxic to plants.  
A) TRUE  
B) FALSE
- 199) The most efficient bench height is between 36 and 42 inches.  
A) TRUE  
B) FALSE
- 200) Which vent releases excess heat and humidity in a greenhouse?  
A) Side vent  
B) Fan vent  
C) Ridge vent  
D) Coolpad vent
- 201) In a fan jet system, the holes in the polyethylene tube that carries the air should be slanted in a(n) \_\_\_\_\_ direction to ensure good circulation.  
A) Downward  
B) Horizontal  
C) Upward  
D) Side to side
- 202) Bending of stems toward light is due to auxins (growth regulator) being destroyed by light.  
A) TRUE  
B) FALSE
- 203) 400 watt HID lights used in propagation houses in Ohio are on for at least 18 hours a day and provide \_\_\_\_\_ foot candles of light.  
A) 200  
B) 400  
C) 600  
D) 1000
- 204) The USDA plant hardiness zone map is a guide to determining plant hardiness.  
A) TRUE  
B) FALSE
- 205) The lower numbers on the hardiness zone map are the warmer zones.  
A) TRUE  
B) FALSE
- 206) A manager of a nursery should know the root and shoot hardiness of containerized plants. The plants' hardiness is not the same when in a container as it is when in the ground.  
A) TRUE  
B) FALSE
- 207) Woody plants that can survive freezing temperatures without injury during winter dormancy are said to be \_\_\_\_\_.  
A) Cool hardy

© 2007, The Ohio Nursery & Landscape Association

The Ohio Certified Nursery Technician program is wholly owned by The Ohio Nursery & Landscape Association. No parts of this document may be reproduced, plagiarized, or distributed without express written permission of the ONLA. Questions? Call (800) 825-5062.

- B) Frost hardy
  - C) Winter hardy
  - D) All of the above
- 208) Cultural practices can influence hardiness.
- A) TRUE
  - B) FALSE
- 209) On flowering trees in early spring, damage can occur to flower buds while vegetative buds remain unharmed.
- A) TRUE
  - B) FALSE
- 210) Freeze damage can be caused by intra or extra cellular ice formation. When intra-cellular is formed, crystals originate within the cells' \_\_\_\_\_.
- A) Cytoplasm
  - B) Spongy mesophyll
  - C) Chloroplast
  - D) Protoplasm
- 211) You have a rose that is susceptible to black –spot and the pathogen *Diplocarpon rosae* and dry weather for two months and regular irrigation at soil surface. Will this rose develop black-spot.
- A) YES
  - B) NO
- 212) Native birch trees have developed methods themselves to avoid becoming infested by *agrilis anxius* or to reduce significance of an infestation.
- A) TRUE
  - B) FALSE
- 213) Host plant, environment and pathogen or insect make up the \_\_\_\_\_.
- A) Disease triangle
  - B) Pest triangle
  - C) IPM triangle
  - D) Treeage
- 214) The core idea of IPM is \_\_\_\_\_.
- A) Control of a specific pest
  - B) Control of a specific disease
  - C) Ongoing decision making
  - D) Environmentally friendly pest and disease management
- 215) Plant treeage is a process of placing diseased or infested plants into one of 3 groups for treatment consideration.
- A) TRUE
  - B) FALSE
- 216) Pest resurgence is the re-infestation of the targeted pest after use of a pesticide. Due to killing both the target and its natural predator.

© 2007, The Ohio Nursery & Landscape Association

The Ohio Certified Nursery Technician program is wholly owned by The Ohio Nursery & Landscape Association. No parts of this document may be reproduced, plagiarized, or distributed without express written permission of the ONLA. Questions? Call (800) 825-5062.

- A) TRUE
  - B) FALSE
- 217) Sanitation is considered a \_\_\_\_\_ tactic in IPM.
- A) Chemical
  - B) Cultural
  - C) Biological
  - D) Petty
- 218) The fungi trichoderma spp. is \_\_\_\_\_.
- A) Actinopelte leaf spot on pin oak
  - B) Root rot fungus
  - C) A biological control agent
  - D) A harmful pathogen that affects seedlings
- 219) A weed can be defined as a plant growing where it is not wanted.
- A) TRUE
  - B) FALSE
- 220) Postemergence herbicides generally have little effect on weeds that germinate after application.
- A) TRUE
  - B) FALSE
- 221) Preemergence herbicides are applied to the \_\_\_\_\_.
- A) Plant foliage
  - B) Soil surface
  - C) Air
  - D) None or above
- 222) \_\_\_\_\_ is an example of a non-selective herbicide.
- A) Denurinol
  - B) Ronstar
  - C) Round-up
  - D) Princep
- 223) Translocated herbicides are effective on actively growing plants as well as dormant plants.
- A) TRUE
  - B) FALSE
- 224) \_\_\_\_\_ are the most common formulation of weed control of container grown plants.
- A) Liquid non-selective herbicides
  - B) Granular post-emergence herbicides
  - C) Liquid selective herbicides
  - D) Granular pre-emergence herbicides
- 225) In herbicide formulation “ai” stands for \_\_\_\_\_.
- A) Alkalinity increase

© 2007, The Ohio Nursery & Landscape Association

The Ohio Certified Nursery Technician program is wholly owned by The Ohio Nursery & Landscape Association. No parts of this document may be reproduced, plagiarized, or distributed without express written permission of the ONLA. Questions? Call (800) 825-5062.

- B) Active ingredient
  - C) Acers implied
  - D) None of the above
- 226) To compute the gallons of liquid formulation needed per acre, you would \_\_\_\_\_.
- A) Divide the desired ai/A by the percent product formulation
  - B) Multiply the desired ai/A by the lb. active ingredient
  - C) Divide the desired ai/A by the lb. active ingredient per gallon
  - D) Multiply the desired ai/A by lb. active ingredient then divide by # of acreage to cover
- 227) Your positive attitude is your most priceless possession in personal relations.
- A) TRUE
  - B) FALSE
- 228) \_\_\_\_\_ in evergreens is an indirect type of winter injury and usually not directly related to the effects of low temperature.
- A) Stem die back
  - B) Desiccation
  - C) Intra-cellular freezing
  - D) Root death
- 229) With evergreens, winter wind has no effect on moisture loss on them.
- A) TRUE
  - B) FALSE
- 230) The VPD between plant (evergreen) and ambient air can be reduced by lowering the leaf temperature by \_\_\_\_\_.
- A) Shade
  - B) Increasing relative humidity with irrigation
  - C) Reducing air movement through leaf canopy
  - D) All of the above
- 231) Changes in the light is one of the factors that starts plant acclimation to winter hardiness.
- A) TRUE
  - B) FALSE
- 232) Which part of the hardy tree received the signal to start the acclimation process first?
- A) Leaves
  - B) Stems
  - C) Shoot
  - D) Root
- 233) Cool temperatures initiate the accumulation of sugars in a plant.
- A) TRUE
  - B) FALSE
- 234) The water content of woody tissues does not decrease as acclimation to cold temperatures proceeds.
- A) TRUE
  - B) FALSE

- 235) Growth patterns of plants are genetically set and no matter how long plants are grown out of their native environment, they will not adapt to the new environment.  
A) TRUE  
B) FALSE
- 236) Plants in hardiness zones 5 & 6 can be over-wintered in polyhouses by grouping them together after \_\_\_\_\_.  
A) Mid-September and cover in October  
B) Mid-October and cover in November  
C) Mid-November and cover in December  
D) First frost and covering them then
- 237) Plant roots need to obtain three things from the soil. (Select the non-essential element listed.)  
A) Air  
B) Water  
C) Mineral salts  
D) Mineral nutrients
- 238) The percentage of sand, silt and clay make up soil \_\_\_\_\_.  
A) Amendments  
B) Texture  
C) Structure  
D) Fertility
- 239) A soil that is considered coarse is high in \_\_\_\_\_.  
A) Silt content  
B) Sand content  
C) Clay content  
D) Aggregates
- 240) Soils with very small pore spaces retain a lot of water.  
A) TRUE  
B) FALSE
- 241) Loam soil is made up of 1/3 portions of three amendments. Which of the answers below is not one of them?  
A) Clay  
B) Sand  
C) Compost  
D) Silt
- 242) \_\_\_\_\_ is a characteristic of soil that is not readily changed.  
A) Soil structure  
B) Soil fertility  
C) Soil texture  
D) A, B & C
- 243) Adding soil amendments to poor soil will help to improve soil structure.

© 2007, The Ohio Nursery & Landscape Association

The Ohio Certified Nursery Technician program is wholly owned by The Ohio Nursery & Landscape Association. No parts of this document may be reproduced, plagiarized, or distributed without express written permission of the ONLA. Questions? Call (800) 825-5062.

- A) TRUE  
B) FALSE
- 244) Soil that has poor structure will have a \_\_\_\_\_.  
A) High bulk density  
B) Low W H C  
C) Coarse texture  
D) All of the above
- 245) Plant researchers have determined that plants require 3 essential elements. Nitrogen, potassium, and phosphorous.  
A) TRUE  
B) FALSE
- 246) The three elements Carbon, Hydrogen & Oxygen are provided by water and carbon dioxide.  
A) TRUE  
B) FALSE
- 247) Nutrient elements that are needed in the largest quantities are called micro-nutrients.  
A) TRUE  
B) FALSE
- 248) Soil fertility and potential nutrient deficiencies are determined by a \_\_\_\_\_.  
A) CEC  
B) WHC  
C) Soil test  
D) Soil texture
- 249) \_\_\_\_\_ is the concentration of hydrogen ions in solution.  
A) WHC  
B) CEC  
C) pH  
D) CHI
- 250) One of the most important test parameters is the \_\_\_\_\_.  
A) Micro-nutrient levels  
B) Macro-nutrient levels  
C) Soil pH  
D) Soil fertility
- 251) Soil with a pH of 7.0 is considered to be \_\_\_\_\_.  
A) Alkaline  
B) Acidic  
C) Neutral  
D) None of these
- 252) The soil \_\_\_\_\_ is said to be very important because it controls the solubility of minerals in the soil solution.  
A) Test

© 2007, The Ohio Nursery & Landscape Association

The Ohio Certified Nursery Technician program is wholly owned by The Ohio Nursery & Landscape Association. No parts of this document may be reproduced, plagiarized, or distributed without express written permission of the ONLA. Questions? Call (800) 825-5062.

- B) pH
  - C) Structure
  - D) Water holding capacity
- 253) Lime is used to lower soil pH.
- A) TRUE
  - B) FALSE
- 254) Soil tests provide pH levels along with P, K, Ca, & Mg, in soils. The most common unit of measure for these elements are \_\_\_\_\_.
- A) PPM
  - B) lb./ A
  - C) mm hos/cm
  - D) mg/ 100g
- 255) CEC stands for \_\_\_\_\_.
- A) Compound element capacity
  - B) Cation exchange capacity
  - C) Compound elemental control
  - D) None of the above
- 256) If your soil test comes back as lb./A (pounds per acre); to convert this to ppm (parts per million) you would \_\_\_\_\_.
- A) Multiply by 100
  - B) Divide by 2
  - C) Square and divide by 4
  - D) Divide by 100
- 257) The symbol K represents \_\_\_\_\_.
- A) Potassium
  - B) Phosphorous
  - C) Carbon
  - D) Calcium
- 258) The symbol Mg represents \_\_\_\_\_.
- A) Molybdenum
  - B) Manganese
  - C) Nickle
  - D) Magnesium
- 259) Soils low in SOM will appear light gray, bluish, or yellow-brown.
- A) TRUE
  - B) FALSE
- 260) A soil test will provide you with the level of nitrogen in the soil.
- A) TRUE
  - B) FALSE
- 261) Air tends to be held in the \_\_\_\_\_ of the medium.
- A) Small pores

© 2007, The Ohio Nursery & Landscape Association

The Ohio Certified Nursery Technician program is wholly owned by The Ohio Nursery & Landscape Association. No parts of this document may be reproduced, plagiarized, or distributed without express written permission of the ONLA. Questions? Call (800) 825-5062.

- B) Large pores
- 262) Porosity of a growing medium is measured by determining the \_\_\_\_\_.
- A) Water holding capacity
  - B) Pore size distribution
  - C) Air capacity
  - D) Bulk density
- 263) The two most critical tests of growing media are pH and soluble salts.
- A) TRUE
  - B) FALSE
- 264) Nematodes are microscopic parasitic eelworms.
- A) TRUE
  - B) FALSE
- 265) Dwarf mistletoe is considered to be a \_\_\_\_\_.
- A) Beneficial plant
  - B) Fungus
  - C) Parasitic plant
  - D) Bacterium
- 266) Which selection below is considered to be a plant pathogen?
- A) Nematode
  - B) Powdery mildew
  - C) Bacteria
  - D) All of the above
- 267) Most plant pathogens do not have limited host ranges.
- A) TRUE
  - B) FALSE
- 268) Diseases differ from insect and other pest damage in that the pathogen invades host plant tissue causing infection.
- A) TRUE
  - B) FALSE
- 269) The leaf of a rose plant has been skeletonized, the pest most likely responsible for this is \_\_\_\_\_.
- A) Cankerworms
  - B) Black vine weevil
  - C) Japanese beetle
  - D) Gypsy moth
- 270) Chewing pest: Borers can usually be identified by the shape, size and direction of the burrows.
- A) TRUE
  - B) FALSE
- 271) A host, pathogen, and environment make up the \_\_\_\_\_.

© 2007, The Ohio Nursery & Landscape Association

The Ohio Certified Nursery Technician program is wholly owned by The Ohio Nursery & Landscape Association. No parts of this document may be reproduced, plagiarized, or distributed without express written permission of the ONLA. Questions? Call (800) 825-5062.

- A) Pest triangle
  - B) Plant treeage
  - C) Disease triangle
  - D) IPM triangle
- 272) The crabapple Malus 'Radiant' is a variety that is not susceptible to apple scab fungus.
- A) TRUE
  - B) FALSE

ANSWER KEY

- 1) A
- 2) B
- 3) A
- 4) C
- 5) A
- 6) C
- 7) B
- 8) C
- 9) B
- 10) A
- 11) B
- 12) A
- 13) D
- 14) B
- 15) B
- 16) C
- 17) A
- 18) A
- 19) B
- 20) B
- 21) A
- 22) A
- 23) D
- 24) A
- 25) C
- 26) A
- 27) D
- 28) A
- 29) D
- 30) C
- 31) A
- 32) B
- 33) C
- 34) B
- 35) A
- 36) B
- 37) C

© 2007, The Ohio Nursery & Landscape Association

The Ohio Certified Nursery Technician program is wholly owned by The Ohio Nursery & Landscape Association. No parts of this document may be reproduced, plagiarized, or distributed without express written permission of the ONLA. Questions? Call (800) 825-5062.

- 38) A
- 39) B
- 40) B
- 41) C
- 42) B
- 43) A
- 44) C
- 45) A
- 46) D
- 47) D
- 48) A
- 49) B
- 50) A
- 51) A
- 52) C
- 53) A
- 54) C
- 55) B
- 56) A
- 57) B
- 58) D
- 59) B
- 60) A
- 61) B
- 62) B
- 63) D
- 64) A
- 65) D
- 66) D
- 67) A
- 68) B
- 69) C
- 70) B
- 71) A
- 72) B
- 73) C
- 74) B
- 75) A
- 76) D
- 77) A
- 78) B
- 79) A
- 80) B
- 81) D
- 82) C
- 83) C
- 84) B
- 85) B
- 86) A
- 87) B

© 2007, The Ohio Nursery & Landscape Association

The Ohio Certified Nursery Technician program is wholly owned by The Ohio Nursery & Landscape Association. No parts of this document may be reproduced, plagiarized, or distributed without express written permission of the ONLA. Questions? Call (800) 825-5062.

- 88) B
- 89) A
- 90) A
- 91) C
- 92) A
- 93) A
- 94) A
- 95) B
- 96) C
- 97) A
- 98) B
- 99) D
- 100) B
- 101) B
- 102) B
- 103) A
- 104) A
- 105) B
- 106) D
- 107) B
- 108) C
- 109) B
- 110) B
- 111) B
- 112) B
- 113) B
- 114) A
- 115) A
- 116) B
- 117) C
- 118) B
- 119) B
- 120) C
- 121) A
- 122) B
- 123) B
- 124) C
- 125) B
- 126) B
- 127) A
- 128) B
- 129) B
- 130) B
- 131) C
- 132) B
- 133) B
- 134) B
- 135) D
- 136) A
- 137) A

**© 2007, The Ohio Nursery & Landscape Association**

The Ohio Certified Nursery Technician program is wholly owned by The Ohio Nursery & Landscape Association. No parts of this document may be reproduced, plagiarized, or distributed without express written permission of the ONLA. Questions? Call (800) 825-5062.

- 138) B
- 139) B
- 140) A
- 141) A
- 142) B
- 143) C
- 144) BC
- 145) C
- 146) A
- 147) A
- 148) C
- 149) A
- 150) D
- 151) D
- 152) B
- 153) A
- 154) C
- 155) B
- 156) A
- 157) C
- 158) D
- 159) B
- 160) A
- 161) B
- 162) B
- 163) A
- 164) A
- 165) B
- 166) B
- 167) B
- 168) B
- 169) A
- 170) D
- 171) A
- 172) B
- 173) B
- 174) C
- 175) C
- 176) A
- 177) B
- 178) B
- 179) A
- 180) A
- 181) A
- 182) C
- 183) A
- 184) B
- 185) B
- 186) B
- 187) B

**© 2007, The Ohio Nursery & Landscape Association**

The Ohio Certified Nursery Technician program is wholly owned by The Ohio Nursery & Landscape Association. No parts of this document may be reproduced, plagiarized, or distributed without express written permission of the ONLA. Questions? Call (800) 825-5062.

- 188) A
- 189) C
- 190) B
- 191) B
- 192) BC
- 193) B
- 194) D
- 195) B
- 196) D
- 197) C
- 198) A
- 199) A
- 200) C
- 201) C
- 202) A
- 203) B
- 204) A
- 205) B
- 206) A
- 207) D
- 208) A
- 209) A
- 210) D
- 211) B
- 212) A
- 213) A
- 214) C
- 215) A
- 216) A
- 217) B
- 218) C
- 219) A
- 220) A
- 221) B
- 222) C
- 223) B
- 224) D
- 225) B
- 226) C
- 227) A
- 228) B
- 229) B
- 230) D
- 231) A
- 232) A
- 233) A
- 234) B
- 235) A
- 236) B
- 237) C

**© 2007, The Ohio Nursery & Landscape Association**

The Ohio Certified Nursery Technician program is wholly owned by The Ohio Nursery & Landscape Association. No parts of this document may be reproduced, plagiarized, or distributed without express written permission of the ONLA. Questions? Call (800) 825-5062.

- 238) B
- 239) B
- 240) A
- 241) C
- 242) C
- 243) A
- 244) A
- 245) B
- 246) A
- 247) B
- 248) C
- 249) C
- 250) C
- 251) C
- 252) B
- 253) B
- 254) B
- 255) B
- 256) B
- 257) A
- 258) D
- 259) A
- 260) B
- 261) B
- 262) C
- 263) A
- 264) A
- 265) C
- 266) D
- 267) B
- 268) A
- 269) C
- 270) A
- 271) C
- 272) B