

**Texas FFA State Nursery / Landscape Career Development Event
General Knowledge Examination Question Bank**

Fifty (50) questions for the General Knowledge Examination of the Texas FFA State Nursery/Landscape Career Development Event will be selected from the following list.

1. PVC irrigation pipe is joined by connectors/couplings that are _____ to the pipe.
 - A. Clamped
 - B. Solvent Welded
 - C. Soldered
 - D. Welded

2. Similar to the textural appearance of plants, _____ can be used to create spatial illusions in a perennial garden.
 - A. Plant growth rate
 - B. Color
 - C. Shape
 - D. Staking

3. To preserve the germination ability of most seeds, store them in a:
 - A. Warm, dry environment
 - B. Cool, dry environment
 - C. Cool environment after scarification
 - D. Warm, moist environment after stratification

4. _____ drawings show an object as seen by the eyes at eye-level.
 - A. Plan
 - B. Section
 - C. Perspective
 - D. Base map

5. Fireblight is a disease that most often affects susceptible plants:
 - A. During the winter
 - B. In recently installed landscapes
 - C. During periods of rapid succulent growth
 - D. In landscapes over four years old

6. The soil pH level primarily controls:
 - A. Soil temperature
 - B. Activity of soil-borne diseases
 - C. Moisture absorption by roots
 - D. Availability of essential plant nutrients

7. Three types of ground patterns used in landscape design are _____ .
 - A. Curved-line, arc-and-tangent, straight-line
 - B. Curved-line, straight-line, squiggle-line
 - C. Curved-line, arc-and-tangent, squiggle-line
 - D. Straight-line, squiggle-line, arc-and-tangent

8. Training plants into three-dimensional ornamental forms, such as animals, is called:
 - A. Topiary
 - B. Espalier
 - C. Heading back
 - D. Bonsai

9. Clay soils require:
- A. A longer time for absorption of irrigation water than sandy soils
 - B. A shorter time for absorption of irrigation water than sandy soils
 - C. About the same time for absorption of irrigation water as sandy soils
 - D. More or less time for absorption than sandy soils, depending on the pH of the clay
10. The approximate range of average annual minimum temperature for Plant Hardiness Zone 8 is:
- A. -20 to -10 degrees
 - B. 10 to 20 degrees
 - C. -30 to -20 degrees
 - D. 20 to 30 degrees
11. Fertilizer recommendations are often given in pounds of nitrogen per thousand square feet. How many 50 pound bags of 10-10-10 fertilizers should be applied to an area 50 X 100 ft. if the recommendation is for 2 pounds of nitrogen per 1000 sq. ft.?
- A. 1
 - B. 2
 - C. 4
 - D. 7
12. Plants that have been clipped or pruned into two-dimensional forms are:
- A. Espalier
 - B. Topiary
 - C. Balanced
 - D. Dynamic
13. A transplanted tree or shrub should be set into the ground:
- A. 50 percent deeper than it was originally planted
 - B. So that the top roots are exposed to the air
 - C. With the top of the container slightly covered
 - D. At the same depth at which it was originally growing
14. Which of the following is true about lady bug beetles? They:
- A. Often feed on vegetable plants
 - B. Sometimes sting gardeners
 - C. Eat aphids
 - D. Are bright green and blend-in with the foliage
15. Plants that use less water and are tolerant of dry landscape sites are called:
- A. Epiphytes
 - B. Xerophytes
 - C. Monoecious
 - D. Dryophytes
16. Damping-off is caused by:
- A. Fungi
 - B. Bacteria
 - C. Nematodes
 - D. Virus
17. Which of the following is a disadvantage of using a time clock to control an irrigation system?
- A. When there is a power outage, the irrigation system runs continuously.
 - B. The plants are watered at set times, whether they need watering or not.
 - C. Time clocks are very expensive.
 - D. Time clocks are difficult to set.

18. Which of the following is a group of terms related to landscape design principles?
- A. Stratify, random, curvature
 - B. Focalization, proportion, simplicity
 - C. Hogarth, symmetrical, curvature
 - D. Thresh, rounding, complexity
19. The Oak Leaf Nursery advertised a group of trees with a trunk caliper of 3 inches. In the trade, it is assumed that this measurement was taken:
- A. 18 inches above ground level
 - B. At the base of the rootball
 - C. 6 inches above ground level
 - D. At breast height (4½ feet above the rootball)
20. One function of the stomates is to:
- A. Give off water vapor
 - B. Prevent disease
 - C. Photosynthesize
 - D. Produce pollen
21. A friable soil is one that:
- A. Is rich in N, P, and K
 - B. Is loose and of good structure and texture
 - C. Is high in clay particles
 - D. Requires humus and fertilizer to be productive
22. Plants usually do not grow well in poorly drained soils because:
- A. Oxygen content is low in poorly drained soils
 - B. The organic matter content of poorly drained soils is too high
 - C. Poorly drained soils warm too quickly in spring
 - D. Plant roots become engorged with water in poorly drained soils
23. To make the living area of a landscape appear larger, a designer should include plants that feature:
- A. Warm-colored flowers such as reds, oranges, yellows
 - B. Cool-colored flowers such as blues, purples, lavenders
 - C. A combination of warm- and cool-colored flowers
 - D. All white flowers
24. Which of the following turf areas is mowed to the lowest height?
- A. Commercial lawn
 - B. Golf fairway
 - C. Home lawn
 - D. Golf green
25. In plants, _____ is the process of converting stored energy into energy for plant growth.
- A. Transpiration
 - B. Photosynthesis
 - C. Respiration
 - D. Pollination
26. A landscape designer uses many _____ in developing the preliminary design for a project.
- A. Perfect plans
 - B. Bubble diagrams
 - C. Site surveys
 - D. Problem statements

27. Fairy ring is caused by:
- A. Fungi
 - B. Grubs
 - C. Pollen
 - D. Nematodes
28. An "x" in the botanical name of a plant means the plant:
- A. Is a true hybrid
 - B. Comes true to type from seed and vegetative propagation
 - C. Comes true to type from only seed propagation
 - D. Has been grafted
29. An example of an organic material is_____.
- A. Pea gravel
 - B. Perlite
 - C. Leaf mold
 - D. Vermiculite
30. Which of the following is microscopic?
- A. Thrips
 - B. Spider mites
 - C. Nematodes
 - D. Aphids
31. The loss of water in the form of vapor from the surface of plant leaves is referred to as:
- A. Transpiration
 - B. Respiration
 - C. Oxidation
 - D. Condensation
32. The basic underlying principle of using a mist propagation system is that it:
- A. Keeps the propagation medium uniformly moist and supplies moisture to the base of the cuttings
 - B. Keeps the plant material cool
 - C. Cools the propagation medium to promote root formation and development
 - D. Increases humidity around the cutting and reduces transpiration
33. _____ is an example of a parasitic plant.
- A. Mistletoe
 - B. Rust
 - C. Bacteria
 - D. Mildew
34. Low-growing landscape plants should:
- A. Be placed in front of intermediate growing plants
 - B. Be placed behind intermediate growing plants
 - C. Not be used in the landscape
 - D. Be planted under large trees
35. Which signal word for pesticide labels indicates the lowest level of toxicity?
- A. Danger
 - B. Warning
 - C. Careful
 - D. Caution

36. In a landscape design, properly located plants and structures.
- A. Can reduce heat intensity
 - B. Need to be constantly pruned and maintained
 - C. Block the view of the front door
 - D. Are not essential for a good landscape design
37. Which of the following would be most suited for a hot, dry, steep bank in the landscape?
- A. Creeping juniper
 - B. English ivy
 - C. Dogwood
 - D. Fescue
38. A shade loving border plant is:
- A. Marigold
 - B. Impatiens
 - C. Zinnia
 - D. Chrysanthemum
39. Soft pencil leads are indicated by the letter _____ .
- A. H
 - B. B
 - C. H1
 - D. F
40. A plant pathologist studies plant:
- A. Insects
 - B. Diseases
 - C. Morphology
 - D. Physiology
41. A plant that dies to the ground at the end of each growing season but comes back from the same root-stock year after year is most accurately described as a(n):
- A. Perennial
 - B. Annual
 - C. Biennial
 - D. Herbaceous perennial
42. Two basic types of pruning are heading-back and thinning-out. Which of the following is true about these pruning methods?
- A. Thinning cuts leave behind a good portion of the stem and many axillary buds.
 - B. Thinning cuts are made close to a main branch or ground and few axillary buds are left.
 - C. Heading cuts usually remove entire branches and leave no buds.
 - D. Heading cuts remove a portion of the stem and only terminal buds are left.
43. Lowering the soil grade around a tree removes many of the tree's roots.
- A. Tap
 - B. Aerial
 - C. Feeder
 - D. Aquatic

44. Water availability, temperature extremes, and _____ should be considered when selecting trees for the landscape.
- A. Slope
 - B. Topography
 - C. Soil type
 - D. Buildings present
45. The four life cycle stages of beetles such as the Japanese beetle are:
- A. Egg, grub, pupae, adult
 - B. Moth, egg, grub, adult
 - C. Grub, pupae, juvenile, adult
 - D. Egg, nymph, pupae, adult
46. An important step in properly composting landscape refuse is to:
- A. Exclude as much air as possible from the compost pile
 - B. Treat each layer with pesticide to control insects and weeds
 - C. Make only small piles to keep the material cool
 - D. Thoroughly moisten each layer of material
47. A pencil lead that is soft, prints well, erases easily, and tends to smear easily is .
- A. 9H
 - B. 3B
 - C. 2H
 - D. F
48. A large perennial that provides a general effect of mass and grows in excess of five feet is:
- A. Yarrow
 - B. Primrose
 - C. Pampas grass
 - D. Dianthus
49. Lawn sprinkler systems are installed so they provide even coverage. This is accomplished by:
- A. Spacing the heads so that each sprinkler sprays to the next sprinkler
 - B. Using sprinkler heads with a square pattern throughout the landscape
 - C. Spacing sprinklers based on needs specified in the soil test
 - D. Using one size pipe throughout the landscape
50. The statement on a bag of fertilizer that lists the percentages of nitrogen, phosphorous, and potassium contained in the fertilizer is called a(n) _____ analysis.
- A. Fertilizer
 - B. Micro-element
 - C. Chelated-Release
 - D. Essential element
51. Callus is a term usually referring to:
- A. The tissue on the collar of a limb
 - B. The first tissue to develop on a cutting just before the roots form
 - C. Deformed growth on plant limbs
 - D. A disease of plant leaves and limbs
52. A _____ is a woody perennial that has more than one main trunk.
- A. Tree
 - B. Flower
 - C. Shrub
 - D. Weed

53. Mrs. Thompson loves spring flowering bulbs. Which of the following would you suggest for Mrs. Thompson to plant?
- A. Hyacinthus orientalis cv.
 - B. Coleus x hybridus
 - C. Lonicera japonica
 - D. Gardenia jasminoides
54. If a two-cycle engine on a weed trimmer uses a 24:1 fuel ratio, you should mix:
- A. 24 parts gasoline to 1 part oil
 - B. 24 parts oil to 1 part gasoline
 - C. Equal amounts of gasoline and oil
 - D. 24 parts gasoline to 1 part engine cleaner
55. Soil texture refers to:
- A. The arrangement of soil particles
 - B. The size of the soil particles
 - C. The ratio of sand to clay in the soil
 - D. The amount of humus in the soil
56. In nursery production, a "liner" refers to _____.
- A. A plastic bag
 - B. A rooted cutting or small seedling
 - C. A type of garden tool
 - D. A plastic mulch covering
57. Which of the following is a deciduous vine?
- A. Chinese wisteria
 - B. Mandevilla
 - C. English ivy
 - D. Rosemary
58. When planting ground covers grown in compressed peat containers:
- A. Be sure to remove the plant completely from the peat container
 - B. Make several cuts down the sides of the container before planting
 - C. Leave the container as is
 - D. Leave ½ inch of compressed peat container exposed above the soil line
59. What part of a lawn mower prevents dust from entering the carburetor?
- A. Air cleaner
 - B. Exhaust chute
 - C. Crankcase
 - D. Hydraulic system
60. The optimum germination temperature for most bedding plant seeds is:
- A. 50 to 55°F
 - B. 60 to 65°F
 - C. 65 to 75°F
 - D. 75 to 85°F

61. Paul had 400 containers of mature Salvia to wholesale to a landscaper. His cost of producing the plants, including labor, was \$832. If he adds 30% to the cost of production as his profit, how much will he charge the landscaper per container?
- A. \$0.27
 - B. \$2.14
 - C. \$2.70
 - D. \$4.81
62. Which of the following statements is true about applying dry fertilizer to a lawn?
- A. Apply dry fertilizer just after a rain
 - B. Apply dry fertilizer in the early morning when the grass is wet from the dew
 - C. It is a good practice to water-in dry fertilizer applied to a lawn
 - D. Dry fertilizer should only be applied late in the day
63. The classifications of soil particles based on size are sand, silt, and:
- A. Clay
 - B. Loam
 - C. Shale
 - D. Gravel
64. Which fuel is used in chainsaws, string trimmers, and other 2-cycle engines?
- A. Gasoline
 - B. Fuel oil
 - C. Diesel fuel
 - D. Gasoline and oil mix
65. Which of the following is the proper recommendation for pruning trees at planting:
- A. Pruning should be limited to shaping the plant by removing dead or damaged limbs
 - B. Trees should be cut back to at least one-half their size to prevent stress on root systems
 - C. Trees should not be pruned until the third year after planting
 - D. Trees should not be pruned at all – the latest trend is to let them develop naturally
66. The practice of manually watering a container plant until water comes out of the drainage holes of the container is effective for helping to reduce the buildup of _____ in the growing medium.
- A. Pathogens
 - B. Soluble salts
 - C. Pesticides
 - D. Herbicides
67. A scale of 1:20 means that:
- A. 2' of landscape equals 1 1/2" of blueprint
 - B. 1" of blueprint equals 20' in the landscape
 - C. 1" of blueprint equals 2' in the landscape
 - D. 5' of landscape equals 6" of blueprint
68. The best time to spray a glyphosate is:
- A. Just before a rain
 - B. When weeds are in active growth
 - C. When weed growth is mature
 - D. Just before weed seeds germinate

69. Which of the following groups contains only evergreen plants?
- A. Bald cypress, Purpleleaf plum, Pecan
 - B. Azalea, Ginkgo, Chinese Holly
 - C. American arborvitae, Camellia, Japanese Yew
 - D. Sweet gum, Crape myrtle, Sycamore
70. Which of the following is a group of small-growing trees?
- A. Sweet gum, Sycamore, Southern magnolia
 - B. Red oak, Bald cypress, Live oak
 - C. Crape myrtle, Eastern redbud, Japanese black pine
 - D. Pecan, Sweet gum, Ginkgo
71. When referring to the USDA Plant Hardiness Zone map, one can determine the:
- A. Minimum expected temperature for an area
 - B. Maximum expected temperature for an area
 - C. Soil characteristics for an area
 - D. Humidity and microclimatic changes for an area
72. One of the best ways to speed up the rooting process of cuttings is to:
- A. Provide bottom heat
 - B. Keep the soil cool and the foliage warm
 - C. Harden them off by laying them out to dry a few days before sticking
 - D. Always take cuttings after mid-day
73. Fred was about to drive the tractor down the street to another landscape job when Alan said, "Hey, you had better put that orange triangle on the back of that tractor before you get run-over." Alan was referring to the:
- A. Farm vehicle sign
 - B. Slow-moving vehicle sign
 - C. Emergency vehicle sign
 - D. Wide-load sign
74. Divide and separate fall blooming perennials:
- A. In early spring
 - B. In late spring
 - C. Mid summer
 - D. Early fall
75. Leaf miners lay their eggs:
- A. On top of leaves
 - B. Inside the leaves
 - C. On the main stem
 - D. On flower buds
76. An area of the landscape that includes space for such items as a clothes line and garbage cans is the _____ are
- A. Service
 - B. Public
 - C. Private
 - D. Recreational

77. The landscape design principle of interconnection:
- A. Is a visual break in sequence
 - B. Is the human perception of space and form related to human dimension
 - C. Is the overall organization and structure of a design
 - D. Occurs when visual components are physically linked together
78. When trying to save trees on a construction site, cut and fill under the drip line of the trees should be limited to a depth of inches.
- A. 6
 - B. 8
 - C. 18
 - D. 0 (Never cut or fill under the drip line of trees.)
79. _____ pruning is a pruning technique concerned primarily with the removal of branches that could lead to damage or weaken a plant's health and appearance.
- A. Natural target
 - B. Random
 - C. Canopy
 - D. Crotch
80. Underground stems with scale-like fleshy leaves (leek and onion) are called:
- A. Tubers
 - B. Roots
 - C. Bulbs
 - D. Stolons
81. In most plants, a hormone called auxin is produced by the terminal bud. It moves downward into the shoot and inhibits the growth and development of lateral buds. This is called:
- A. The apex auxin complex
 - B. Apical dominance
 - C. Lateral dominance
 - D. Terminal bud inhibition
82. Some seeds are produced in the fall and remain on or in the ground until they germinate in the spring. Exposing seeds to the winter cold and moist soil is nature's method of .
- A. Scarifying
 - B. Stratifying
 - C. Acidifying
 - D. Sporulating
83. Once they are beneath the bark surface, _____ are difficult to control.
- A. Borers
 - B. Thrips
 - C. Aphids
 - D. Mealybugs
84. The use of plant materials and landscaping techniques to conserve soil moisture and to reduce water usage is:
- A. Xeriscaping
 - B. Waterscaping
 - C. Natural landscaping
 - D. Bogscaping

85. Which of the following describes plants that lose their leaves during the winter?
- A. Evergreen
 - B. Deciduous
 - C. Coniferous
 - D. Herbaceous
86. Hardiness refers to:
- A. The strength of the wood of a tree
 - B. The quality of being strong and being able to survive in a certain region
 - C. The hardness of the soil in which a plant is being planted
 - D. The ability of a plant to grow indoors
87. Hardening-off is a term used in the nursery/landscape industry to mean:
- A. Allowing herbaceous plants to become woody
 - B. Acclimatizing landscape plants to coldframe conditions
 - C. Coating plants with a protective plastic-type spray prior to transplanting
 - D. Acclimatizing tender plants to harsher, outdoor conditions
88. Which one of the following plant hardiness zones is colder than Zone 6?
- A. Zone 10
 - B. Zone 8
 - C. Zone 7
 - D. Zone 3
89. Many insect traps attract insects with:
- A. Phermones
 - B. Dried flowers
 - C. A strong insecticide
 - D. Fresh flowers
90. Some vines use _____ to support themselves as they climb
- A. Tendrils
 - B. Aquatic roots
 - C. Stems
 - D. Tap roots
91. A _____ is a landscape designer's tool for drawing circles on a landscape plan.
- A. Scale
 - B. Circle template
 - C. T-square
 - D. Protractor
92. The following plant grows from a tuber:
- A. Celosia
 - B. Impatiens
 - C. Japanese honeysuckle
 - D. Elephant Ear
93. The best definition of a surfactant is a:
- A. Material added to a liquid spray solution to reduce surface tension between the liquid and leaf surface
 - B. Type of soap used to wash off pesticide residue by increasing surface tension between the leaf and residue
 - C. Material to protect leaf surfaces from pesticides by creating a waxy seal over the leaf
 - D. Type of pesticide formulation with an oily consistency for protecting high pressure spray nozzles from wear

94. Which type of insecticide would be most effective against sucking-type insects?
- A. Contact
 - B. Systemic
 - C. Dust
 - D. Aerosol
95. The three major divisions of a soil profile are:
- A. mulch, clay, and parent material
 - B. topsoil, subsoil, and bedrock
 - C. topsoil, clay layer, and rock layer
 - D. topsoil, subsoil, and parent material
96. A lawn mower with blades parallel to the surface of the ground is called a(n):
- A. Reel mower
 - B. Rotary mower
 - C. De-thatching mower
 - D. Electric mower
97. Which of the following groups contains only deciduous plants?
- A. *Cedar Elm, Carya illinoensis, Red Oak*
 - B. *River Birch, Southern Magnolia, Ilex vomitoria*
 - C. *Taxus cuspidata, Sycamore, Bradford pear*
 - D. *Live Oak, Chinese Tallow, Sophora secundiflora*
98. A 50 pound bag of 5-10-15 fertilizer contains _____ pounds of nitrogen.
- A. 15
 - B. 10
 - C. 5
 - D. 2.5
99. The scientific name for Heavenly Bamboo is:
- A. *Ligustrum japonicum*
 - B. *Nandina domestica*
 - C. *Pyracantha coccinea*
 - D. *Raphiolepis indica*
100. The turfgrass least tolerant of shade is:
- A. Zoysia
 - B. Fescue
 - C. St. Augustine
 - D. Bermudagrass
101. Which of the following is not an important environmental requirement for germination to occur?
- A. Proper temperature
 - B. Oxygen
 - C. Carbon dioxide
 - D. Moisture
102. Light energy, carbon dioxide, and water enter into the process of photosynthesis, through which:
- A. Respiration results
 - B. Carbohydrates are formed
 - C. Chlorophyll is formed
 - D. Amino acids are formed

103. When planting B&B plants:
- A. The burlap should be completely removed from the ball
 - B. The tie string should be cut from the trunk of the plant
 - C. The burlap should be pulled up and tied securely to the trunk for protection
 - D. The burlap should be allowed to dry completely before planting
104. The most common synthetic root-promoting chemicals used in rooting hormones are:
- A. IBA and AAN
 - B. CCA and ACD
 - C. ISO and OSB
 - D. IBA and NAA
105. There are five common methods of night lighting for landscapes. They are:
- A. Bright, dim, subdued, marginal, and transparent lighting
 - B. Walk, silhouette, shadow, up, and down lighting
 - C. Moderate, bright, dim, regular, and flash lighting
 - D. Cross, down, up, reverse, and slope lighting
106. What information is not contained in the legend on a final landscape plan?
- A. Plant names
 - B. Specific notes concerning installation
 - C. Plant quantities
 - D. Designer's name
107. When planting a bare-rooted tree, the tree should be planted:
- A. at 6 inches above the original soil level
 - B. At 2 inches above the original soil level
 - C. At 6 inches below the original soil level
 - D. Directly even with the original soil level
108. The road in front of Steve's house has become traffic congested in recent years. The view, and especially the noise, bothers the family. When Steve discussed this problem with a landscaper, the landscaper mentioned berms. What was the landscaper talking about?
- A. A special type of wall to block the noise and view of traffic on the road
 - B. His recent fishing trip where he caught several berms
 - C. Trees planted in multiple rows between the house and road
 - D. Tall mounds of soil placed between the house and road to block the noise and view
109. A propagator in a nursery business is responsible for:
- A. Starting new plants from seeds, cuttings, grafting, or other means and planning the propagation schedule
 - B. Increasing new accounts by spreading propaganda
 - C. Carrying out an extensive plant breeding program and applying for plant patents
 - D. Making sure the area used for pulling orders of container grown landscape-size plants is well stocked
110. A glyphosate is a non-selective herbicide that will kill:
- A. Perennial weeds
 - B. Any green plant that it contacts
 - C. Annual weeds
 - D. Both annual and perennial weeds

111. A major advantage for producing nursery stock in containers is that it:
- A. Is less expensive than growing in nursery fields
 - B. Allows for transplanting any time during the growing season
 - C. Requires less water and fertilization than field-grown crops
 - D. Requires less labor than field-grown crops
112. A method of fertilizer application is _____ .
- A. Sterilization
 - B. Pasteurizing
 - C. Side dressing
 - D. Leaching
113. Brown patch, dollar spot, and gray snow mold are all diseases of:
- A. Azaleas
 - B. Turfgrasses
 - C. Trees
 - D. Evergreens
114. Which plant is a vine?
- A. *Ficus benjamina*
 - B. *Pinus thunbergiana*
 - C. *Ilex cornuta*
 - D. *Lonicera japonica*
115. If a container-grown nursery crop has been over watered for a long period, a grower might expect to find the roots in the following condition:
- A. The roots dead or absent at the bottom of the container but healthier in the top portion of the container
 - B. The roots dead or absent at the top of the container but healthier in the bottom of the container
 - C. The roots growing through the drain holes in the bottom of the container
 - D. The roots may be extra thick and bright white in color
116. Site features to consider when conducting a site survey include:
- A. Topography, client analysis, natural features, and climate
 - B. Topography, soil conditions, natural features, and existing vegetation
 - C. Natural features, existing vegetation, soil conditions, and client analysis
 - D. Natural features, climate, existing vegetation, and client analysis
117. Food produced in the leaves moves to other parts of a plant through the _____ .
- A. Phloem
 - B. Xylem
 - C. Veins
 - D. Arteries
118. Which of the following would be the best response if a client calls you in October and wants to know what to do about a 20-foot Japanese pine that has turned completely brown?
- A. Cut it down. It is definitely dead.
 - B. Wait until spring and see if it sprouts green needles again.
 - C. Do nothing. Pine trees shed naturally in the fall.
 - D. Do nothing. The Japanese pine is just going dormant.
119. When installing a landscape, which step (from the following list) should be completed LAST?
- A. Plant the trees and shrubs
 - B. Add amendments to the soil
 - C. Install the drainage system
 - D. Build retaining walls and garden walkways

120. Cuttings in the rooting bench should be:
- A. Kept constantly moist
 - B. Kept dry during the day and moist at night
 - C. Fertilized regularly
 - D. Scarified before watering
121. Examples of cool season grasses include perennial ryegrass, bentgrass, and:
- A. Bermudagrass
 - B. Fescue
 - C. St. Augustine
 - D. Zoysia
122. Magnesium, calcium, and sulfur:
- A. Are essential elements needed for plant processes
 - B. Are micro-elements
 - C. Can be found in incomplete fertilizers
 - D. Are only needed by some plants
123. A "spreader-sticker" added to a spray solution causes the chemical to:
- A. Become more diluted in the sprayer
 - B. Better cover the plant surface and resist being washed off by rain and irrigation
 - C. Stick to the diseased areas of the plant and run-off the areas it is not needed
 - D. Penetrate the cuticle to the leaf, allowing more effective sticking power
124. Informal landscapes:
- A. Contain geometric patterns and perfect balance
 - B. Include sheared and sculpted hedges
 - C. Are constructed with asymmetrical balance and curved lines
 - D. Usually contain straight, not curved, lines
125. When selecting ginkgo trees for the home landscape, you should choose:
- A. Male and female trees
 - B. Male trees only
 - C. Female trees only
 - D. Mature female trees only
126. Functional roles of plants in the landscape do not include:
- A. Screening
 - B. Developing the structural framework of the design
 - C. Enclosing
 - D. Greening up
127. Professional-grade string trimmers are usually powered by:
- A. Electricity
 - B. A 4-cycle engine
 - C. A 2-cycle engine
 - D. Diesel fuel
128. To increase the bushiness of a flowering plant while the plant is young, one should:
- A. Apply a growth retardant
 - B. Increase the nitrogen in the soil surrounding the plant
 - C. Pinch the stem tips of the plant
 - D. Increase the amount of water the plant receives

129. Liriope and Ajuga are generally classified as:
- A. Small flowering shrubs
 - B. Groundcovers
 - C. Small evergreen shrubs
 - D. Semi-evergreen shrubs
130. The recommended minimum width for a residential walkway in the public area of the landscape is _____ feet.
- A. 3.5
 - B. 6.5
 - C. 5
 - D. 7.5
131. Which of the following is a major reason for mulching landscape plants?
- A. Increases anti-aerobic activity in the soil
 - B. Supplies nutrients
 - C. Moderates soil temperature and conserves soil moisture
 - D. Attracts earthworms
132. A color scheme in a garden that produces a carnival-like effect is referred to as being:
- A. Monochromatic
 - B. Analogous
 - C. Complementary
 - D. Polychromatic
133. A group of plants located along the perimeter of a landscape use area is called a _____ planting.
- A. Border
 - B. Corner
 - C. Foreground
 - D. Foundation
134. Which tree has the finest textured foliage?
- A. Southern magnolia
 - B. Sweet gum
 - C. Mesquite
 - D. Sycamore
135. Which of the following serves as a food reservoir for the developing embryo within the seed of a monocot?
- A. Endosperm
 - B. Radical
 - C. Plumule
 - D. Testa
136. The term _____ is used in horticulture to define plant injury sometimes caused by pesticides.
- A. Eutrophication
 - B. Expectoration
 - C. Emulsification
 - D. Phytotoxicity

137. An example of a creeping or prostrate coniferous evergreen is:
- A. Juniperus horizontalis
 - B. Lobularia maritima
 - C. Abelia x grandiflora
 - D. Prunus caroliniana
138. A major advantage for using slow-release fertilizer in container-grown nursery stock is that it:
- A. Supplies nutrients over a long period of time with one application
 - B. Can easily be leached from the soil if too much is applied
 - C. Can be applied without expensive equipment
 - D. Can be injected through the irrigation system
139. A plant that remains vegetative during its first season of growth and flowers in the second season is a(n):
- A. Biennial
 - B. Annual
 - C. Propagule
 - D. Perennial
140. A landscaper in New York calls a wholesaler/grower in Tennessee to inquire about plant material for a landscape job. One of the trees he asks about is bald cypress. He wants to know if it is hardy in middle New York. The grower says, "Let me see, that is Zone 4 ..." They are talking about the:
- A. AAN Hardiness Zone Plan
 - B. UPS Zone Index for safe shipping of plants
 - C. USDA Plant Hardiness Zones
 - D. Critical Zone Hardiness Index
141. Plowing or tilling a bed or lawn when it is excessively wet may:
- A. Kill beneficial organisms in the soil
 - B. Damage the structure of the soil
 - C. Change the soil texture
 - D. Stratify the soil
142. Most landscape plants like the soil pH:
- A. Slightly acidic
 - B. Strongly acidic
 - C. Slightly alkaline
 - D. Strongly alkaline
143. In the plant name *Ilex x meserveae* 'Blue Princess':
- A. The genus is *Ilex*, the "x" means it is a hybrid, the species is *meserveae*, and the cultivar is Blue Princess.
 - B. The family is *Ilex*, the "x" means it is a tetraploid, the genus is *meserveae*, and the species is Blue Princess.
 - C. The species is Blue Princess, the "x" means that its origin is unknown, the variety is *meserveae*, and the genus is *Ilex*.
 - D. The genus is *Ilex*, the "x" means that it is patented, the species is *meserveae*, and Blue Princess is the variety.
144. B&B in the nursery/landscape trade means:
- A. Balled and burlapped
 - B. Bagged in burlap
 - C. Bare-rooted and bagged
 - D. Burlapped in a bag

145. When installing a landscape, which step (from the following list) should be completed FIRST:
- A. Plant the trees and shrubs
 - B. Add amendments to the soil
 - C. Install the drainage system
 - D. Build retaining walls and garden walkways
146. Which insect eats out trails between the leaf surfaces?
- A. Thrips
 - B. Leaf miners
 - C. Aphids
 - D. Spider mites
147. Wisteria, clematis, and Japanese honeysuckle are examples of:
- A. Trees
 - B. Vines
 - C. Shrubs
 - D. Groundcovers
148. When should soil NOT be tilled?
- A. When it is wet
 - B. When it is dry
 - C. During late fall
 - D. During spring warm-up
149. When using heat to sterilize/pasteurize soil, the soil should be heated to:
- A. 100°F for 1 hour
 - B. 280°F for 1 hour
 - C. 200°F for 1 hour
 - D. 180°F for 30 minutes
150. Mr. Roberts told his horticulture class that the temperature for rooting shrubs should be no lower than 70 °F. He was referring to the:
- A. Air temperature above the bench
 - B. Air temperature at bench level
 - C. Temperature of the mist water
 - D. Temperature of the rooting media
151. Traditional garden centers, in many cases, have been able to compete with chain department stores by providing:
- A. Lower prices
 - B. Better service
 - C. Better refund policies
 - D. Cleaner stores
152. One characteristic of Roundup (Glyphosate) that customers sometimes object to is:
- A. It's long lasting effect
 - B. That it takes several days to kill weeds
 - C. That it is extremely toxic to pets
 - D. That it temporarily stains the soil surface orange
153. Which LD-50 rating listed is the most potentially lethal to a human, based on animal studies?
- A. 1750
 - B. 84
 - C. 945
 - D. 10,000

154. Larger nursery pots are measured by the:

- A. Gallon
- B. Ounce
- C. Inch
- D. Height

155. Water _____ to help reduce disease in nursery crops.

- A. Late in the afternoon
- B. Early in the day
- C. At night
- D. With overhead sprinklers

156. One reason modern horticultural fabrics used in landscaping are said to be better than black polyethylene film is they:

- A. Prevent moisture from penetrating too deeply
- B. Make a better base for rock mulch
- C. Allow exchange of gases between soil and air
- D. Completely control weeds

157. Who is responsible for establishing the binomial system for naming plants?

- A. Aristotle
- B. Linnaeus
- C. Weinberg
- D. Bernuli

158. The best type of sand to use in soil mixtures for container grown plants is:

- A. Beach
- B. Fine-textured
- C. White, fine-textured
- D. Coarse textured

159. Scientific names generally consist of two words, the first being the genus and the second being the:

- A. Specific epithet
- B. Family
- C. Order
- D. Cultivar

160. In the name *Acer palmatum* 'October Glory', 'October Glory' is a _____ if it did not occur as a natural mutation:

- A. Species
- B. Cultivar
- C. Genus
- D. Variety

161. What is the function of the axillary bud on the stem?

- A. To provide food storage
- B. To aid in seed dispersal
- C. To produce a new leaf or stem
- D. To help heal wounds of the plant

162. Failure to firm down the soil around a newly planted tree or shrub can result in air pockets. This may cause:
- A. Drying of plant roots
 - B. Soil heaving in winter
 - C. Disease
 - D. Over watering problems
163. Which is most important to the financial health of a nursery/landscape business/
- A. Gross sales
 - B. Marginal cost
 - C. Net profit
 - D. Cost margin
164. Leaves that show interveinal chlorosis probably suffer from:
- A. Nitrogen excess
 - B. Chlorine damage
 - C. Water stress
 - D. Iron deficiency
165. Shrubs planted in small groups in the landscape are generally placed in:
- A. Groups of 2
 - B. Odd numbered groups (i.e. 3,5,7)
 - C. Even numbered groups)i.e. 2,4,6)
 - D. Groups of 4
166. For maximum effectiveness, mulches should be applied about _____ deep.
- A. 1 inch
 - B. 3-4 inches
 - C. 8-10 inches
 - D. 10-12 inches
167. What is one reason mid-day watering of lawns in the summer is usually not recommended?
- A. Much of the water is lost through evaporation
 - B. Plant roots do not readily absorb water during the daylight hours
 - C. Homeowners pay a premium for water if they irrigate between the hours of 8AM and 5PM
 - D. Fast evaporation of the water from plant leaves may cause disease
168. The landscape profession for which you are most likely to need a license is:
- A. landscape designer
 - B. landscape architect
 - C. landscape contractor
 - D. landscape maintenance supervisor
169. An individual or firm hired to install or construct a portion of a large landscape job is called a:
- A. Subcontractor
 - B. Contractor
 - C. Contract specialist
 - D. Maintenance specialist
170. Which is most likely NOT a benefit from using mulch?
- A. Reduced disease
 - B. Reduced insects
 - C. Reduced water loss from the soil
 - D. Moderated soil temperatures

171. Plants sold in the landscape trade are sold by _____ name.
- A. Botanical
 - B. Family
 - C. Order and genus
 - D. Order and family
172. Plants which evolve and grow naturally in an area are termed _____ plants.
- A. Exotic
 - B. Specimen
 - C. Accent
 - D. Native
173. Which of the following definitions best describes 'auxin'?
- A. A naturally occurring plant hormone which promotes plant growth
 - B. A chemical used as a plant growth retardant
 - C. The capital of Texas and home of the USDA
 - D. A naturally occurring plant chemical produced to deter disease organisms
174. A plant that produces flowers that have either stamens or pistils, but not both on the same plant is called:
- A. Staminate
 - B. Dioecious
 - C. Angiosperm
 - D. Monoecious
175. The thick portion of a seed that contain the tissue used as food by the seedling in its early growth is the:
- A. Endosperm
 - B. Gymnosperm
 - C. Monoecious
 - D. Dioecious
176. In landscaping terms, if the mower blade is set too low and the turf is not level, the mower may _____ the turf in spots.
- A. Scalp
 - B. Aerate
 - C. Slice
 - D. Scorch
177. The viability of a group of seeds is measured by:
- A. The number of seeds per pound
 - B. Maturity of the seeds
 - C. The germination percentage
 - D. Permeability of the seeds
178. The analysis of fertilizer is guaranteed by the manufacturer and regulated by the:
- A. IRS
 - B. USDA
 - C. American Nursery and Landscape Association
 - D. Extension Service

179. A landscaper has to decide whether to put in a groundcover instead of turfgrass on a site with the following characteristics. Which characteristic is the most important factor in making this decision?
- A. The landscape area has a 25% slope
 - B. The soil has only 3 inches of topsoil
 - C. The site is in full sun
 - D. The site faces East
180. When taking a soil sample, be sure to take cores at least _____ inches deep.
- A. 2
 - B. 3
 - C. 6
 - D. 14
181. Which of the following is NOT a rule-of-thumb traditionally followed by landscapers?
- A. Shrubs should be planted about 6-12" from the foundation
 - B. Home walkways should be wide enough for 2 people to walk side by side
 - C. Shrubs should be no closer than 2.5-3 feet to the home foundation
 - D. Landscape plants should be dry at night when possible
182. A landscaper says that the soil on a home development site will not perk. What does that mean?
- A. It will not crack in very cold weather
 - B. Water does not pass through the soil at an acceptable rate
 - C. The soil particles do not form proper aggregates
 - D. The soil does not have proper form to resist slippage and cracking
183. Landscape plans generally include all of the following except:
- A. The number of each type of plant to be planted
 - B. The mature width of the plant
 - C. The mature height of the plant
 - D. A north orientation marker
184. Which landscape tool is used to prune branches an inch or larger in diameter?
- A. pruning knife
 - B. Ax
 - C. hand pruner
 - D. pruning saw
185. Some of the salt buildup in potted crops can be removed by :
- A. with holding water
 - B. adding fertilizer
 - C. leaching
 - D. adding lime to the irrigation water
186. The process in which water, grass seed, fertilizer, cellulose fiber and a glue type material are mixed together and sprayed onto the soil to establish turf is called _____.
- A. pressure spray
 - B. seed injection
 - C. hydroseeding
 - D. top dressing
187. Warm season turf grasses include which of the following?
- A. fescue
 - B. ryegrass
 - C. Bermuda grass
 - D. bluegrass

188. The hardscape in a landscape design is defined as:
- A. landscapes filled with mostly hardwoods
 - B. a space with a large area of concrete
 - C. structures, paving, fencing, etc incorporated into a landscape
 - D. the initial, rough, landscape drawing
189. Trees are fertilized with granular fertilizer by spreading it within _____.
- A. a four foot radius of the trunk
 - B. the drip line
 - C. the drip line and at least ten feet beyond the drip line
 - D. a 30 foot radius of the trunk
190. The nursery landscape trade and related industries are sometimes referred to as the _____.
- A. green industry
 - B. outdoor consortium
 - C. united environmental industry
 - D. federated nursery industries
191. Blue spots along the cutting edge of a rotary mower blade after sharpening indicate that _____.
- A. the metal was distorted during sharpening
 - B. the blade was made of inferior metal
 - C. there are dull spots remaining on the blade
 - D. the blade was overheated during sharpening
192. Which of the following plants is commonly grafted or budded?
- A. Ginkgo
 - B. Pansy
 - C. Roses
 - D. Yew
193. Which of the following propagation methods usually produces the greatest amount of genetic variation in the offspring?
- A. grafting
 - B. tissue culture
 - C. division
 - D. seedling
194. Flowering plants that are tetraploid have reduced maintenance costs because of the reduced need to _____.
- A. water
 - B. fertilize
 - C. spray for insects
 - D. dead head
195. Rod plans to start a wholesale nursery growing Japanese maples. It will take him two years to produce the first saleable crop. Which of the following will be most affected?
- A. net worth
 - B. cash flow
 - C. inventory
 - D. production scheduling

196. When servicing the spark plug on a lawn mower, the electrode should be _____ before reinstalling it in the mower.
- A. cleaned and dried
 - B. cleaned and coated with oil
 - C. cleaned and filled with oil
 - D. cleaned, dried and the electrode gap closed
197. Joe's landscaping pays rent, legal fees, utilities and insurance, all of which are classified as _____
- A. variable costs
 - B. marginal costs
 - C. contingency costs
 - D. overhead costs
198. Which would not be part of a lawn irrigation system?
- A. solenoid valve
 - B. differential valve
 - C. backflow valve
 - D. PVC pipe
199. The ideal soil is composed of _____.
- A. 25% solid material, 25% air and 50% water
 - B. 25% solid material, 25% water and 50% air
 - C. 25% water, 25% air and 50% solid material
 - D. 25% air, 25% nutrients and 50% water
200. Dead, decaying plant and animal material in the soil is referred to as _____.
- A. the microorganisms that are present in the soil
 - B. organic matter
 - C. soil texture
 - D. soil reaction
201. The main objective of root pruning is to _____.
- A. fit the plant in a hole
 - B. encourage normal stem growth
 - C. develop a compact and fibrous root system
 - D. increase water absorption
202. A systemic insecticide refers to an insecticide that _____.
- A. kills on contact
 - B. is absorbed through the roots and leaves of a plant
 - C. is applied as a fumigant
 - D. does not come in a granular form
203. When mowing turf, it is recommended that no more than _____ of the leaf blade be removed at each cutting.
- A. one half
 - B. two thirds
 - C. one third
 - D. one eighth

204. A layer of partially decomposed stems, roots and leaves of grass which develops above the soil surface in the lawn is called _____.
- A. mineral matter
 - B. inorganic matter
 - C. mulch
 - D. thatch
205. What is one reason the container grown sector of nursery crop production has increased in recent years?
- A. the plants develop circling root systems
 - B. factors affecting plant growth can be maintained at optimum levels
 - C. soilless media is beneficial to plant growth
 - D. container plants require less care
206. Which of the following best describes seed scarification?
- A. placing seed capsules in the sun for natural drying
 - B. planting seeds in a nursery flat to a depth of 2 times the seed diameter
 - C. removing some of the seed coat by using a file, sandpaper or an acid solution
 - D. using a dibble to spot off newly planted seedlings
207. A financial plan for the future is called a _____.
- A. cash analysis
 - B. net worth statement
 - C. deed
 - D. budget
208. If a business has assets of \$ 500,000; total expenses of \$ 95,000 and \$ 210, 000 in total revenue, what is the net profit?
- A. \$115,000
 - B. \$210,000
 - C. \$290,000
 - D. \$305,000
209. Benefits of landscaping include which of the following?
- A. cooling of air and providing oxygen
 - B. absorbing pollutants from the air and reducing noise levels
 - C. filtering of water and preventing erosion
 - D. landscaping does all of these
210. Plants need _____ essential elements for proper growth and development.
- A. 3
 - B. 8
 - C. 16
 - D. 32
211. The terms triploid, diploid and haploid refer to the _____.
- A. number of flowers per stem
 - B. formation of leaves
 - C. number of bud breaks expected after pruning
 - D. number of chromosomes

212. Natural soil is arranged in layers referred to as _____.
- A. soil horizons
 - B. soil rings
 - C. soil texture
 - D. sand, silt and clay
213. Which is the best definition of the term understory, as used in landscaping?
- A. the bottom level of a 2 story house
 - B. the basement of a two story house
 - C. shrubs and other plants planted under the eaves of a house
 - D. smaller plants that grow under the canopy of trees
214. Which is NOT a type of leaf arrangement?
- A. alternate
 - B. opposite
 - C. whorled
 - D. pyramidal
215. Which of the following is the best definition of an F1 hybrid?
- A. the first generation of seedlings from genetically different parents
 - B. a plant that is genetically superior to all other cultivars
 - C. a plant that is genetically inferior to all other cultivars
 - D. the first cross between the offspring of A,B, C, D and E generations
216. The synthetic growth regulator, Indole -3-butyric Acid (IBA), is used in the nursery trade as a ____.
- A. foliage preservative
 - B. rooting hormone
 - C. surfactant
 - D. insect control
217. Which is a drawback to planting English or Virginia Creeper on the side of a wood or vinyl sided house?
- A. the adhesive tips of the ivy damage the siding or leave unsightly blemishes
 - B. these plants are groundcovers and are hard to train on walls
 - C. the leaves turn brown in the fall and are unsightly
 - D. it is difficult to prune vines on siding
218. Horticultural chemicals should be stored in which of the following?
- A. A cool room such as a basement of a house
 - B. A free-standing, locked building
 - C. A refrigerated storage cabinet
 - D. The garage refrigerator
219. When mowing Bermuda grass lawns, what is the general range for the proper height of cut?
- A. 1.5 to 2.5 inches
 - B. 3 to 4 inches
 - C. 4 inches
 - D. 5 inches
220. Freshly cut bark chips and saw dust should not be used as a soil amendment, because they ____.
- A. are infested with disease
 - B. rob the soil of nitrogen during decomposition
 - C. hold too much water around the plant
 - D. release toxic elements into the soil

221. Which of the following grasses has the longest winter dormancy period?
- A. Zoysia
 - B. Scale
 - C. Aphids
 - D. Bluegrass
222. What type of watering conditions would cause the clustering of turf grass roots at the top of the soil? Assume that there has been little or no rainfall.
- A. infrequent soaking
 - B. frequent, light watering
 - C. applied once a week
 - D. rarely watering
223. The factor used as an indication of grade and general vigor of Hybrid Tea Rose plants sold at retail is the number of healthy _____.
- A. leaves below the petioles
 - B. canes
 - C. lateral roots
 - D. terminal buds
224. Which of the following is an indication of a fertile soil?
- A. small brown pebbles
 - B. earth worms
 - C. grubs
 - D. a grey or yellow subsoil
225. Which of the following statements is not true?
- A. Frost may form if the sky is clear, the air is calm and the night temperature is only slightly below freezing?
 - B. The heat given off from water sprinkled over plants may prevent frost from forming if the temperature is only slightly below freezing.
 - C. Frost is more likely to form in low lying areas / pockets, when temperatures are at the freezing point.
 - D. Frost is most likely to form when there is low, heavy cloud cover and a slight cool breeze
226. Plant diseases caused by rain splashed microorganisms from the ground can be reduced by ____.
- A. applying mulch around and underneath plants
 - B. removing all mulch outside the drip line
 - C. removing all mulch from around and underneath the plant
 - D. using only clean topsoil as backfill
227. An area that has a slightly different climate conditions than the surrounding land, such as the north side of a house which provides shelter from excess sun and wind, is called a _____.
- A. terrain specific locale
 - B. climate modified locale
 - C. micro-climate
 - D. macro-climate
228. The best time to prune azaleas is _____.
- A. just before they bloom
 - B. just after they bloom
 - C. when they are dormant
 - D. in spring before leaves appear

229. Fertilizers should be added to soil _____.
- A. Every year
 - B. At $\frac{1}{2}$ the rate of fertilizer
 - C. According to package instructions and only in the winter
 - D. Based on soil test results
230. All other things being equal, which diameter of pipe or combination of pipes will carry the most water?
- A. One 2 inch pipe
 - B. Three 1 inch pipes
 - C. Five $\frac{1}{2}$ inch pipes
 - D. Four $\frac{3}{4}$ inch pipes
231. Of the grasses listed below, which is most commonly used on golf greens?
- A. Fescue
 - B. St. Augustine grass
 - C. Bentgrass
 - D. Mondo grass
232. Generally, a lawn needs about _____ inch(es) of water a week, either as rain or irrigation.
- A. 1
 - B. 2
 - C. 3
 - D. 4
233. Which of the following can be said about applying an herbicide to a lawn in granular form rather than as a liquid spray?
- A. There is little or no drift from the granular form
 - B. The liquid form is much more expensive
 - C. The amount of active ingredient needed is greatly reduced with the granular form
 - D. Most broadleaf weeds have developed resistance to liquid herbicide sprays
234. Large nursery pots are measured by the _____.
- A. gallon, and sizes are strictly regulated
 - B. gallon, and the exact size varies by the manufacturer
 - C. inch, and sizes are strictly regulated
 - D. height, and sizes are strictly regulated
235. Tree roots that are responsible for most nutrient uptake are found _____.
- A. within the upper 8" of topsoil
 - B. outside the dripline
 - C. between 18" and 28" in depth
 - D. in the subsoil
226. Which of the following government organizations would want to talk to you if you shipped nursery plants across state lines without a license?
- A. OSHA
 - B. FBI
 - C. USDA
 - D. IRS

237. When Alan finished sharpening his rotary mower blade he noticed that his mower vibrated and shook so bad that he could hardly control it. What was wrong?
- A. The blade was out of balance
 - B. The blade was made of inferior metal
 - C. The blade had been overheated affecting its temperament
 - D. The spark plug was loose
238. A pre-emergence herbicide is applied _____.
- A. to broadleaf weeds only
 - B. after the weeds have germinated and emerged from the soil
 - C. before the weed seeds germinate
 - D. to grasses only
239. Soil around the foundation of a house is often more alkaline than surrounding soil due to which of the following?
- A. Leaching from the home's paint
 - B. Leaching from the masonry mortar on the home and masonry debris from construction
 - C. Decaying wood scraps that were buried around the foundation during construction
 - D. Chemicals applied to prevent termites
240. The most commonly used lawn grasses in the U.S. can be divided into _____ or _____ types.
- A. Perennials or annuals
 - B. Warm season or cool season
 - C. Grasses or broadleaved
 - D. Spring or summer
241. Mowing the lawn in a different direction each time helps reduce the chance of _____.
- A. soil compaction and undesirable grain set
 - B. spreading disease and insects
 - C. causing excess wear on one area of the mower
 - D. excess wear on one part of the mower blade
242. Recommended service intervals for jobs such as changing the oil in motorized landscape equipment is usually measured in _____ of operations.
- A. miles
 - B. hours
 - C. days
 - D. months
243. When propagating woody cuttings, a growth promoting substance is some times applied to the base of the cutting in order to _____.
- A. conserve moisture in the cuttings
 - B. speed the healing process
 - C. speed the development of roots on the cuttings
 - D. all of the above
244. A post emergence herbicide is applied _____.
- A. to broadleaf weeds only
 - B. after the weeds have germinated and emerged from the soil
 - C. before the weed seeds germinate
 - D. just as the weed seeds are germinating

245. Large trees used to frame a one story, ranch style home can make the home seem _____ than it really is.
- A. smaller
 - B. closer to the viewer
 - C. wider
 - D. larger
246. Which of the following is important in producing a uniform size and quality container grown nursery crop?
- A. Use the same soil mix for the entire crop
 - B. Leave a uniform water space at the top of each pot
 - C. Tamp the soil to the same degree of firmness in each pot
 - D. All of the above
247. Though not recommended, if 2 cycle engine fuel is actually used in a 4-cycle engine:
- A. The engine will not start, or will be hard to start
 - B. There is not a problem, the engine will run just fine
 - C. The engine will be much louder than normal
 - D. The engine will likely smoke a lot, but it will run
248. If a house is painted in several colors you might be worried about the colors of the house and the plant flower color clashing. One flower choice that would be safest to use is _____.
- A. red
 - B. blue
 - C. white
 - D. pink
249. A privacy fence should be at least _____ feet high if the purpose is to screen the view of neighbors at ground level or others walking near the property at the same elevation.
- A. 4
 - B. 5
 - C. 6
 - D. 8
250. Plants showing symptoms of nitrogen deficiency will show which of the following symptoms?
- A. Purple veins in the leaves
 - B. Tiny brown spots between the leaf veins
 - C. Abnormally long internodes
 - D. Yellowing of the entire leaf