

**NATIONAL FFA NURSERY/LANDSCAPE
CAREER DEVELOPMENT EVENT
GENERAL KNOWLEDGE EXAM
2014**

Directions: Select the best answer for each item and mark your selection on the answer sheet provided. Using a #2 pencil, completely darken in the letter on the answer sheet that corresponds to your answer for each item.

1. A method used to measure the acute oral and dermal toxicities of pesticides is called:
 - A. Insecticide Tolerance Dosage (ITD).
 - * B. LD₅₀.
 - C. 2, 4-D₂₅.
 - D. Toxicology Dose (TD).

2. In which of the following situations would a soil sterilant be used most appropriately?
 - * A. On a gravel parking lot
 - B. Under mature trees
 - C. Around shrubs planted in beds
 - D. Under small to medium sized trees

3. Which of these is NOT a type of plant grafting or budding?
 - A. Whip and tongue grafting
 - B. Cleft grafting
 - * C. Root-budding
 - D. T-budding

4. In a weed-infested lawn where there are large bare spots, and less than one-third of the lawn is covered with a desirable grass, a landscaper may decide it is best to start over by spraying the lawn with _____ to kill all existing grass and weeds and then replant the lawn.
 - * A. Glyphosphate (Roundup)
 - B. A selective insecticide
 - C. Mercaptan (Captan)
 - D. 2, 4-D

5. Which of the following is NOT true about leaf galls on trees and shrubs?
 - A. Leaf galls look unattractive but most are harmless to the overall health of the tree or shrub.
 - B. Leaf galls are abnormal growths of plant tissue caused by an organism attacking the leaf.
 - C. Leaf galls may be caused by insects, mites, fungi, or bacteria.
 - * D. Once leaf galls appear, a comprehensive spray regime must be followed to save the plant.

6. A bright orange triangle on the back of a vehicle means:
 - * A. Slow moving vehicle.
 - B. Disabled veteran.
 - C. Oversized load.
 - D. Farm truck.

7. Which of these statements about turf irrigation is most accurate?
 - A. It is best to water turf each day with shallow watering.
 - B. It is best to irrigate turf every other day with shallow watering rather than deep watering.
 - C. Turf should be watered only during mid-day.
 - * D. Turf should be watered deeply about once a week as needed.

8. An important factor in applying pesticides is knowing what part of the plant is generally attacked by the pest and where the pest is usually found on the plant. Spider mites usually congregate:
- * A. Under the leaves.
 - B. Along the main trunk and stems.
 - C. On top of the leaves along the midrib.
 - D. Along the petioles of new-growth leaves.
9. Many nursery and landscape operations are incorporating more environmentally sustainable practices into their businesses to reduce their carbon footprint. These include all of the following EXCEPT:
- A. Reducing energy and fossil fuel use.
 - B. Conserving natural resource inputs.
 - C. Recycling materials.
 - * D. Decreasing production efficiency.
10. Larger landscape projects, such as commercial building complexes, should include a storm water management plan to help route storm water runoff into:
- * A. Infiltration swales and basins.
 - B. Small creeks that flow to rivers.
 - C. Municipal sewer systems.
 - D. Rivers that flow to lakes.
11. Which of the following concerning the inventory of nursery and landscape businesses is true?
- * A. Items in inventory are assets.
 - B. If items are in inventory at the end of the year, it indicates that a profit was made in the business.
 - C. Inventory items are reported as a loss in the business analysis.
 - D. An increase in inventory is not considered in the business analysis.
12. If production and sales at a container nursery increase dramatically, variable costs most likely would:
- A. Remain the same.
 - B. Decrease.
 - C. Not be a factor in increased production.
 - * D. Increase.
13. In monocots, the number of cotyledons is ____, while the number of cotyledons in dicots is ____.
- * A. One; two
 - B. One; three
 - C. Two; three
 - D. Two; four
14. Rooting softwood cuttings requires management of several environmental factors for the highest rate of success. These factors include which of the following?
- A. Low humidity, saturated rooting media, full sunlight
 - * B. High humidity, bright but indirect light, moist rooting media
 - C. Cool rooting media, warm air temperature, and low light
 - D. Fine textured rooting media, low light, and low soil temperature

15. It is always wise to have the landscape site checked for underground utility lines before digging. Call _____ to request that utility lines be located and marked before beginning a landscaping job.
- A. 911
 - * B. 811
 - C. 711
 - D. 611
16. Which of these generally increases the rooting percentage of softwood cuttings?
- * A. Applying gentle bottom heat
 - B. Fertilizing cuttings heavily for the first thirty days
 - C. Providing soil moisture through sub-irrigation
 - D. Allowing the soil and plants to dry between irrigation cycles
17. Blackspot on roses, as well as powdery and downy mildews on plants, are caused by:
- * A. Fungi
 - B. Insects
 - C. Viruses
 - D. Bacteria
18. Which of these trees, depending on variety, may bloom white or pink?
- A. Tuliptree
 - B. Sweet Gum
 - C. European Beech
 - * D. Dogwood
19. Which of the following is considered a landscape maintenance task?
- A. Laying sod
 - * B. Deadheading marigolds
 - C. Harvesting sod
 - D. Planting trees
20. Generally, the best time to prune deciduous trees is:
- A. Early winter and early fall.
 - B. Late summer and early fall.
 - * C. Late winter and early spring.
 - D. Mid-winter and mid-summer.
21. A bag of fertilizer with an analysis of 5-10-15 consists of:
- A. 5% nitrogen, 10% potash, and 15% phosphorus.
 - B. 5% potash, 10% nitrogen, and 15% phosphorus.
 - C. 5% phosphorus, 10% potash, and 15% nitrogen.
 - * D. 5% nitrogen, 10% phosphorus, and 15% potash.
22. Which of the following is a characteristic of dicotyledons?
- * A. Dicot veins are net-like, branching from the midrib into a network of finer veins.
 - B. Dicots have parallel leaf veins.
 - C. Dicot seedlings have one cotyledon.
 - D. Grasses are dicotyledons.

23. Which of these fertilizers is most likely to cause the greatest flush of new vegetative growth if applied to lawn grasses when other conditions are favorable for growth?
- * A. 33-0-0
 - B. 5-10-15
 - C. 0-10-10
 - D. 15-25-10
24. If the pH of a Bermudagrass or fescue lawn is 5.0, then an application of _____ would most likely be recommended to adjust the pH.
- A. Sulfur
 - * B. Lime
 - C. Ammonium nitrate
 - D. Aluminum
25. Overhead watering of nursery crops in the evening, especially after the sun sets may:
- A. Cause leaching.
 - B. Increase insect problems.
 - C. Cause damage to the leaf stomata.
 - * D. Increase the chance of disease development.
26. Which signal word on a pesticide label indicates the most serious hazard?
- A. Caution
 - B. Warning
 - * C. Danger
 - D. Harmful
27. A foundation planting with 10 foot high plants in the background and 1 foot high plants in front of them would most likely violate this principal or element of design:
- * A. Proportion.
 - B. Simplicity.
 - C. Variety.
 - D. Texture.
28. Which items should be included in variable costs for a container plant nursery?
- * A. Containers and plant labels
 - B. Utilities and computer equipment
 - C. Equipment payments and land payments
 - D. Land payments and utility bills
29. PLANET is best described as:
- * A. A national trade association serving the landscape and lawn care industry.
 - B. The national organization of plant hobbyists.
 - C. A federal agency charged with protection of the nursery and landscape industry.
 - D. An arm of the USDA for tracking and controlling pests in the nursery and landscape industry.
30. A plant process in which stored sugars are used as energy by the plant for growth is:
- A. Photosynthesis.
 - * B. Cellular respiration.
 - C. Chlorosis.
 - D. Embryonic exchange.

31. A number of good management practices may be used to control pests, including removing infested plants, maintaining healthy propagation stock, and applying pesticides. When used together as needed, these methods are best described as:
- A. Regulated Plant Management.
 - * B. Integrated Pest Management.
 - C. Integrated Plant Observation.
 - D. Regulated Pest Control.
32. If sand and organic matter are incorporated into a growing media for container plants, it would be expected that _____ will be improved.
- * A. Drainage
 - B. Topography
 - C. Silt content
 - D. Clay content
33. How many trees can be grown on an acre if they are planted in rows that are 6 feet apart with trees in the row spaced 4 feet apart?
- A. 20,708
 - B. 13,560
 - C. 10,893
 - * D. 1,815
34. Most hollies are _____, having male parts on one plant and female parts on another plant.
- * A. Dioecious
 - B. Monecious
 - C. Dichotomous
 - D. Monogamous
35. If a tree is a weeping variety, such as a weeping willow or weeping cherry, it would be expected to:
- A. Lose unusually large amounts of water through transpiration.
 - * B. Develop gracefully drooping limbs.
 - C. Be highly susceptible to breaking limbs.
 - D. Require regular shearing to control growth.
36. Crowding container-grown shrubs closely together for long periods during growth will most likely result in plants being too:
- * A. Tall and leggy.
 - B. Short and wide.
 - C. Compact.
 - D. Stiff and easily broken by wind.
37. Some non-native landscape plants have spread out of control into the surrounding natural landscape. They grow aggressively and compete with native plants. In the landscape trade they are known as:
- A. Natives.
 - * B. Invasives.
 - C. Perennials.
 - D. Occidentals.

38. A lawn is observed to have hundreds of rod-shaped plugs of soil about three inches long lying on top of the turf where they have been pulled from the soil. What landscape practice is most likely to have been performed on this turf?
- * A. Core aeration
 - B. Spike aeration
 - C. Fertilizer injection
 - D. Pesticide injection
39. One guideline for retail face-to-face sales is to:
- A. Show the customer all items that meet their need as well as all the items they should not consider.
 - B. Provide the customer with the two least expensive items for them to choose from.
 - C. Tell the customer your favorite item and don't offer any other choices until they have refused that item.
 - * D. Help the customer narrow their choices and provide a few, two to three, items to choose from.
40. A 50 pound bag of fertilizer with an analysis of 16-4-8 contains _____ pounds of nitrogen.
- * A. 8
 - B. 16
 - C. 28
 - D. 30
41. A soil with a pH of 4.0 would probably be too _____ for most landscape plants.
- A. Alkaline
 - * B. Acidic
 - C. Dry
 - D. High in potash
42. The use of parasitic wasps and lady bird beetles to control insects is considered:
- A. Insecticidal pest control.
 - B. Cultured pest management.
 - * C. Biological pest control.
 - D. Cannibalistic pest management.
43. Two closely related plants may be the same genus and species yet have different characteristics because they are:
- A. In different kingdoms.
 - * B. In different cultivars.
 - C. In different families.
 - D. In different orders.
44. A dichotomous key may be used to:
- * A. Identify an unknown plant.
 - B. Initiate safety procedures.
 - C. Analyze the profitability of a business.
 - D. Determine the proper spacing of plants in the growing area.
45. A light covering of straw is sometimes placed over newly seeded turf areas to:
- * A. Hold moisture.
 - B. Supply nitrogen.
 - C. Conserve nutrients.
 - D. Supply organic nutrition.

46. Which of the following is NOT true about the proper construction and maintenance of a compost pile?
- A. Food scraps are usually excluded from compost piles to prevent rodent infestation.
 - * B. The compost pile should be kept as cool as possible.
 - C. Topsoil may be added as an inoculant to a compost pile.
 - D. A compost pile should be kept moist.
47. Which of these parts on a small gasoline engine allows electricity to jump a gap during the cranking process, creating a spark that ignites the fuel and starts the engine?
- A. Cylinder
 - B. Air gap
 - C. Flywheel
 - * D. Spark plug
48. Most plant diseases are caused by:
- A. Pythium and rhizoctonia.
 - * B. Bacteria, fungi, and viruses.
 - C. Nematodes.
 - D. Molds, nematodes, and mildew.
49. One of the primary safety features on a chainsaw is the:
- A. Pressure valve.
 - * B. Chain brake.
 - C. Differential.
 - D. Plastic handle.
50. Focalization in the home landscape is used to:
- * A. Focus the viewer's eye on a feature of the landscape or home.
 - B. Balance the landscape between each end of the home.
 - C. Unify the public and private areas of the landscape.
 - D. Simplify the overall landscape complexity.

End
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