

**NATIONAL FFA NURSERY/LANDSCAPE
CAREER DEVELOPMENT EVENT
GENERAL KNOWLEDGE EXAM
2015**

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. In most interiorscapes, such as those found in indoor malls and large office buildings, the most limiting factor in maintaining good plant health is usually:
 - A. soil nutrition
 - B. light
 - C. daily variation in temperature
 - D. water
2. Which of these plants die to the ground each fall and reemerge in the spring from the same root system in most areas of the US?
 - A. Peony
 - B. Marigold
 - C. Wax begonia
 - D. Zinnia
3. Which of these plants bloom naturally in the fall only?
 - A. Chrysanthemum
 - B. Marigold
 - C. Wax begonia
 - D. Zinnia
4. After the agriculture class planted hollies on each side of the entrance to the school, it was noticed that those plants on the right of the entrance produced colorful berries while those on the left never produced berries. What is the most likely explanation?
 - A. Hollies on the left and right are most likely different cultivars.
 - B. The soil on the right side has better structure.
 - C. Plants on the left side of the entrance probably did not receive enough fertilizer.
 - D. Hollies are dioecious and the plants on the left are likely male.
5. Which area of turf on a golf course is usually mowed shortest and generally receives the most care?
 - A. collar and apron
 - B. fairway
 - C. green
 - D. rough
6. When a golf ball lands on the green, the ball may dig into the turf requiring repair of the ____ by the greensworker.
 - A. backspin path
 - B. ball mark
 - C. ball shot dip
 - D. greens dip

7. Which of the following statements is most correct about soils of the US?
- A. Soil pH is usually acidic.
 - B. Soil pH is usually alkaline.
 - C. Soil pH varies widely by region.
 - D. Soils vary widely in nutrition but all require the addition of lime to some degree.
8. Which description of job duties most accurately matches those of an arborist?
- A. Maintains, prunes, removes, plants, and performs general care of trees.
 - B. Maintains landscapes, performing such tasks as fertilization, pruning, mowing, and mulch application.
 - C. May plan and install specific portions of a landscape or entire landscape jobs including irrigation, walls, plant materials, landscape features, hardscapes, and softscapes.
 - D. Mainly plans and designs landscapes including grading, installing drainage, and irrigation systems. A four-year or higher college degree is required.
9. Which of the plants below are considered invasive plants?
- A. White pine and Japanese maple
 - B. English ivy and bamboo
 - C. Bermuda grass and Japanese holly
 - D. Winged euonymus and spirea
10. A soil with a pH of 7.5 would probably be too _____ for most landscape plants.
- A. alkaline
 - B. acidic
 - C. dry
 - D. high in potash
11. If the _____ are pruned from a plant, the plant can generally be expected to become bushier.
- A. stamens
 - B. lateral buds
 - C. petioles
 - D. terminal buds
12. Which description of job duties most accurately matches those of a Landscape Contractor?
- A. Maintains, prunes, removes, plants, and performs general care of trees.
 - B. Maintains landscapes, performing such tasks as fertilization, pruning, mowing, and mulch application.
 - C. May plan and install specific portions of a landscape or entire landscape jobs including irrigation, walls, plant materials, landscape features, hardscapes, and softscapes.
 - D. Mainly plans and designs landscapes including grading, installing drainage, and irrigation systems. A four-year or higher college degree is required.
13. Which description of job duties most accurately matches those of a Landscape Architect?
- A. Plan and design landscapes. They hold bachelors or higher academic degrees. They are often involved in larger projects such as planning the building site, grading, drainage, and landscape features for an office complex before construction on the buildings begin.
 - B. Maintains landscapes, performing such tasks as fertilization, pruning, mowing, and mulch application.
 - C. May plan and install specific portions of a landscape or entire landscape jobs including irrigation, walls, plant materials, landscape features, hardscapes, and softscapes.
 - D. Mainly plans and designs landscapes including grading, installing drainage, and irrigation systems. A two-year or higher college degree is required.

14. Which of the following is an example of an unethical business practice?
- A. A nurseryman offers a 20% discount to a landscape company purchasing large numbers of plants.
 - B. A nurseryman accepts sample plants from a grower's sales representative.
 - C. A landscape estimator exaggerates the need for repairs to a customer's landscape after a storm.
 - D. A turf management company creates an advertisement that highlights their strengths and states that other companies cannot perform to their standards.
15. In which of the following situations does the Occupational Safety and Health Act (OSHA) protect workers from disciplinary action if they refuse to perform a job that may be hazardous?
- A. All the workers agree that the work is too difficult.
 - B. The workers have been informed of the type of disciplinary action that might be taken.
 - C. The workers are paid less than \$20 per hour.
 - D. The workers believe in good faith that they are in imminent danger and have informed their employer.
16. Which of the following best describes an entrepreneurial opportunity with the greatest opportunity for high personal profit, but also with the greatest chance for personal financial loss?
- A. A career as the sales representative for a plant biotechnology company.
 - B. A position as the marketing manager of a large, incorporated landscape company.
 - C. A position as head accountant for a newly franchised business that is not incorporated.
 - D. A career as the owner of a small landscape maintenance company.
17. Which of these is the best description of an invoice?
- A. A bill sent to a supplier by the purchaser authorizing shipment of a product to the customer at a specified price and terms.
 - B. A document sent to a vendor requesting prices and quantities of materials available and terms of payment for selected products.
 - C. A document sent by the selling company describing their products or services for sale and terms of payment available.
 - D. A bill sent by the business providing a product or service to the purchaser which establishes an obligation on the part of the purchaser to pay for the products or services.
18. Which signal word on a pesticide label indicates the least serious hazard and is often found on pesticides sold to homeowners?
- A. Caution
 - B. Warning
 - C. Danger
 - D. Harmful
19. How many trees can be grown on an acre if they are planted in rows that are 5 feet apart with trees in the row spaced 3 feet apart?
- A. 1,401
 - B. 1,560
 - C. 2,904
 - D. 4,215

20. Which of these is a pest control system in which some pest damage is tolerated before pesticides are applied?
- A. integrated pest management
 - B. zero tolerance pest management
 - C. pre-treatment pest management
 - D. fumigation pest management
21. The most important type of insurance that a landscaper should have to help protect the property owner as well as themselves includes:
- A. collision and conversion insurance
 - B. life insurance on each worker
 - C. income protection insurance
 - D. business liability insurance
22. Which of these is a beneficial organism in the landscape?
- A. Spider mites
 - B. White grubs
 - C. Earth worms
 - D. Aphids
23. Which of these is a complete fertilizer?
- A. 46-0-0
 - B. 33-0-0
 - C. 0-46-0
 - D. 5-10-15
24. Which of these fertilizer formulations would be best to use in a situation where root growth stimulation and flower production was desired instead of foliage growth?
- A. 46-0-0
 - B. 3-20-20
 - C. 20-20-20
 - D. 33-0-0
25. On a topographic map, lines are drawn to represent vertical elevation (slope of the property). These are referred to as:
- A. vertical detail lines
 - B. common elevation bench marks
 - C. contour lines
 - D. lines of symmetry
26. Plants, such as irises and daffodils, which produce foliage and flowers during the growing season, die back to the ground during winter, and re-sprout the next spring are called:
- A. Flowering annuals
 - B. Woody perennials
 - C. Herbaceous perennials
 - D. Herbaceous annuals

27. Landscape soils that are _____ are generally best for plant growth.
- A. sandy
 - B. loamy
 - C. high in silt content
 - D. high in clay content
28. The following notes were given for a landscape installation project. Which is **not** within standard recommendations?
- A. The walk to the front door should be 42 inches wide.
 - B. The front drive should be 6 feet wide.
 - C. Foundation plants should be a minimum of 3 feet from the foundation.
 - D. The mature shrub height should not be high enough to cover windows.
29. Which of the following types of organic matter generally should **not** be used in the landscape planting holes?
- A. Peat moss
 - B. Composted leaves
 - C. Aged, ground, pine bark
 - D. Fresh sawdust
30. Three of the six landscape design principles are: rhythm, unity, and focalization. What are the other three?
- A. Balance, proportion, and simplicity
 - B. Orientation, texture, and pattern
 - C. Line, form, and ray
 - D. Spacing, color, and line
31. Which of the following plants is most often propagated by budding or grafting?
- A. Azalea
 - B. Hybrid Tea Rose
 - C. Sweet Gum
 - D. Red Maple
32. Some of the most important topics of discussion affecting the nursery and landscape industry in recent years include:
- A. water use restrictions, green roofs/walls, and noise pollution control.
 - B. temperature inversion, fertilizer analysis, and irrigation water temperature.
 - C. biological propagation, topsoil restriction, and recycling safety.
 - D. hazards of sharp equipment, diesel mowers, and carbon toxicity.
33. One of the long recognized retail techniques to help with retail sales is to:
- A. place no more than nine products before the customer to choose from.
 - B. show the customer every possible product to meet their needs.
 - C. let the customer hold, examine, and get the feel of the product.
 - D. always point out the product specification on the side of the box.
34. Which of the following is undesirable in landscape trees?
- A. Terminal buds
 - B. V-shaped crotches
 - C. Lenticels
 - D. Internode growth

35. If a home owner applied lime, nitrogen, phosphate, and potash at recommended rates to his lawn one year, which nutrient is he almost certain to have to reapply the next year?
- A. Lime
 - B. Nitrogen
 - C. Phosphorus
 - D. Potash
36. The most common type of landscape plan drawing prepared by designers is the _____. In this type of drawing, the viewer observes the site and landscape objects as though they are above the site, looking downward.
- A. plan view
 - B. elevation view
 - C. perspective view
 - D. axonometric view
37. Which of these is a good procedure when planting large balled and burlapped trees in the landscape?
- A. Remove all the burlap and any string or rope around the ball or tree trunk prior to placing the tree in the planting hole.
 - B. Set the tree in the planting hole, then remove ropes or string securing the burlap to the root ball and roll the burlap back from the trunk.
 - C. At planting, leave the burlap and securing ropes and twine in place on the root ball for 6 to 12 months before removal.
 - D. At planting, re-tighten the rope or twine securing the burlap to the root ball; leave the burlap and securing ropes and twine in place for approximately 6 to 12 months or until the tree is well established.
38. Which of the grass types below will be **less likely** to increase in width of the grass plant and completely cover an area when planted at less than optimal rate?
- A. warm season grasses
 - B. grasses with rhizomes
 - C. grasses with stolons
 - D. bunch type grasses
39. A homeowner has been on vacation for 3 weeks and comes home to an out-of-control lawn with the grass 5 to 6 inches tall. She normally keeps the grass cut to about 2 inches high. What is the best advice for this homeowner?
- A. cut off no more than 1/3 of the growth at one time until the grass is back to the desired height
 - B. make sure the mower blade is very sharp; cut the grass to two inches but water and fertilize heavily after mowing
 - C. cut the grass to two inches high in the late afternoon and water heavily to prevent sun scorch
 - D. fertilize and water the grass about two days before mowing to make sure the grass is in good health, then cut to two inches high
40. At maturity, a large deciduous tree planted at the _____ corner of a home in North America will provide summer afternoon shade while allowing the winter sun to warm the home.
- A. northwest
 - B. southeast
 - C. southwest
 - D. northeast

41. Suppose a landscaper has a client who wants more unusual plants in their home landscape. They have found photos of plants they like on the internet and sent them to the landscaper. After identifying the plants, the landscaper should consult _____ to determine the likelihood of the plants surviving in the client's landscape.
- A. the National Oceanic and Atmospheric Administration (NOAA) national weather map
 - B. the National Weather Service Rainfall Map for that area
 - C. an Extension Service Weather Map
 - D. the USDA Plant Hardiness Zone Map
42. Characteristics of the bare-root system of packaging of landscape plants for sale and transplanting include all of the following **except**:
- A. The transplanting season is extended through summer, much longer than container and balled and burlapped plants.
 - B. Bare-root packaged plants are lighter in weight than container plants and balled and burlapped plants.
 - C. Bare-root packaged plants are generally smaller plants and less expensive compared to container and balled and burlapped plants.
 - D. The plants sold by this method are usually deciduous species.
43. Although methods vary by grower, there are basic guidelines for preparing containers of soil for seeding. Which of these is one acceptable method of firming the seedbed in the nursery trade?
- A. Pack the soil in the container with the palms of the hand as tightly as possible to remove water and air.
 - B. Lightly tamp the soil-filled contain on the bench two to three times to settle the soil.
 - C. Firm the soil with the hands; water thoroughly and apply more hand pressure so the soil is very firm.
 - D. None of the above. Soil in containers for seeding should be loose and contain as much air as possible.
44. Which category of plants below fit this definition best? *"A naturally aggressive plant species introduced to a new habitat. It colonizes easily in new areas and usually gains an ecological advantage over plants native to the area because the insects, diseases, and foraging animals that naturally keep its growth in check in its native habitat are not present in its new habitat."*
- A. domesticated plants
 - B. bryophytes
 - C. invasives
 - D. epiphytic plants
45. Which of the following statements is true about plant propagation by cuttings?
- A. Remove any leaves that will be under the soil or touching the soil when the cutting is stuck.
 - B. Remove all lenticels and any leaves that will be under the soil when the cutting is stuck.
 - C. Treat each node and bud on hard-to-root cuttings with the appropriate rooting hormone.
 - D. Avoid placing any of the cutting nodes under the soil surface.
46. A homeowner is having trouble with rodents and occasionally snakes around their compost pile. Which of these would be a good recommendation to alleviate this problem?
- A. Once the manure pile is constructed, do not disturb the organic matter.
 - B. Keep the manure pile as dry as possible by covering with a water-proof tarp or plastic cover.
 - C. Do not add meat scraps and similar food materials to the compost pile.
 - D. All the above.

47. A group of foliage plants were taken from the nursery where they had received optimal light, nutrition, water, and other conditions for rapid growth and shipped to a contractor installing these and other plants in a large indoor shopping mall. The plants were installed in the interiorscape project within 3 days of leaving the nursery. In a few weeks these once healthy plants began to show signs of failing health such as leaf drop, yellowing leaves, and general unthriftiness. Which of these is the likely problem?
- A. the plants were not properly acclimated
 - B. the plants were over fertilized
 - C. a disease from other plants in the interiorscape infected the new plants
 - D. the plants were getting too much light in the mall interiorscape
48. The school agriculture department created a plant replica of the school mascot, a tiger, by training and pruning a plant into the shape of a tiger. This type of specialized plant art is best known as:
- A. residual pruning
 - B. heading-back
 - C. topiary
 - D. micro-pruning
49. A sidewalk in a high traffic area of a public site that would allow two people to walk together or pass each other comfortably should be about ____ feet wide minimum.
- A. 12
 - B. 10
 - C. 8
 - D. 5
50. In the botanical name *Echinacea purpurea* 'Magnus', Magnus is the:
- A. family
 - B. cultivar
 - C. genus
 - D. species

End
FBF