

**2019 MN Nursery Landscape State FFA CDE
Information and Skills Exam – 300 pts.**

1. Which of the following is true about nitrate in soil?
- A. It is very immobile and not subject to leaching
 - B. It is very mobile in soil and is subject to leaching
 - C. It is not available for plant uptake
 - D. It is toxic to most plants

2. **Greener Greens plus 0.20% Prodiamine**

19-0-3 Guaranteed Fertilizer

Analysis

Nitrogen(N)..... 19.00%

19.00% Urea Nitrogen*

Soluble Potash (K₂O) 3.00%

Derived From

Urea, Muriate of Potash, and Polymer-Coated, Sulfur-Coated Urea. *4.19%

Slowly Available Urea Nitrogen from Polymer-Coated, Sulfur-Coated Urea

For selective preemergence control of grass and broadleaf weeds in established Turf Grasses (excluding golf course putting greens) and lawns

Active Ingredient

Prodiamine, [N3,N3-Di-n-propyl-2,4-dinitro-6-(trifluoromethyl)-

m-phenylenediamine0.20%

Inert Ingredients:99.80%

Total100.00%

Using the fertilizer label above, how many pounds of Prodiamine would there be in a 50 lb. bag?

- A. 10
 - B. 1
 - C. 20
 - D. 9.5
3. Positive drainage refers to:
- A. grading an area with a positive attitude
 - B. grading an area to a minimum 25% slope
 - C. grading an area to a minimum 2% slope
 - D. grading an area to a minimum 10% slope

4. An underground utility marked with the color yellow indicates:
- A. Communications
 - B. Gas
 - C. Sewer
 - D. Irrigation
5. You just purchased a home that has an irrigation system with six stations. Each station has four heads that emit 0.25 gallons per minute per head. If each zone runs for 30 minutes how many gallons of water will your system use during the entire cycle?
- A. 24
 - B. 180
 - C. 96
 - D. 2,880
6. In plant pathology, the virulence of an organism refers to:
- A. The resistance of a pathogen to pesticides
 - B. How often a plant is inoculated
 - C. The ability of a pathogen to cause disease
 - D. The ability of a plant to reproduce naturally
7. Which plant blooms the earliest?
- A. Azalea
 - B. Forsythia
 - C. Spirea
 - D. Hydrangea
8. Monocot stems have the xylem and phloem:
- A. on each side of a cambium layer
 - B. in small bundles scattered through the stem
 - C. side by side
 - D. near the outside of the stem
9. The pH refers to the relative concentration of hydrogen ions in a solution and ranges from 1 to 14
- _____ = acidic
- _____ = neutral
- _____ = alkaline.
- A. 1-4, 5-8, 9-14
 - B. 1-6, 7; 8-14
 - C. 2-7; 1; 8-14
 - D. 8-14; 7; 1-6

10.



The device the arrow is pointing to is known as a:

- A. Chain adjuster
 - B. Chain brake
 - C. Choke
 - D. Plastic handle
11. The process of growing plants in a symbiotic relationship with fish is called:
- A. fish farm
 - B. olericulture
 - C. tank farming
 - D. aquaculture
12. 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)
13. Stomach poisons are most effective against:
- A. Insect pupae
 - B. Flying insects
 - C. Sucking insects
 - D. Chewing insects

14. A commonly used insecticide that is very toxic to bees is:
- A. Neem oil
 - B. Imidacloprid
 - C. Corn gluten meal
 - D. Prodiamine
15. Two current issues with the most economic impact on the landscape maintenance industry include:
- A. emerald ash borer and Japanese beetles
 - B. turf decline and herbicide resistance
 - C. emissions and noise pollution
 - D. power blower and string trimmer safety
16. The most cold-sensitive parts of a plant are:
- A. Shoots
 - B. Roots
 - C. Buds
 - D. Leaves
17. Information typically shown in a plot plan may include:
- A. lot configuration, property lines, right-of-ways
 - B. lot configuration, trees, patios
 - C. walkways, property lines, utilities
 - D. storage shed, trees, patios
18. In a commercial nursery operation, which plant is most likely propagated from seed?
- A. Red twigged dogwood
 - B. Peegee hydrangea
 - C. Kentucky coffeetree
 - D. Blue Star juniper
19. A retaining wall higher than 3 feet must be engineered.
- A. True
 - B. False
20. Trees that are dioecious have:
- A. flowers with both male and female reproductive parts
 - B. only male or female flowers, but not both.
 - C. both male and female flowers on the same plant.
 - D. Thick bark

21. Field production of gladiolus is accomplished by using:
- A. Corms
 - B. Cuttings
 - C. Crowns
 - D. Bulbs
22. In the name *Acer rubrum* 'Autumn Flame', 'Autumn Flame' is a:
- A. species
 - B. cultivar
 - C. genus
 - D. variety
23. Which tree below has new growth that resembles candles which is the source of the term "candle stage"?
- A. Honeylocust
 - B. Oak
 - C. Spruce
 - D. Maple
24. The scion portion of a graft refers to the:
- A. Roots
 - B. Buds
 - C. Stems
 - D. Both B and C
25. Which cool season turfgrass is the most salt tolerant?
- A. Centipede grass
 - B. Kentucky Bluegrass
 - C. Perennial Ryegrass
 - D. Fine fescue
26. REI is an acronym for:
- A. an outfitter store
 - B. Re-entry interval
 - C. Restricted entry interval
 - D. Registered entomological integration
27. A _____ is a typical example of a piece of equipment that has a 2-cycle engine.
- A. Bobcat skidsteer
 - B. Weed whip
 - C. Trailer winch
 - D. Reel mower

28. Dicamba is a widely used herbicide for broadleaf weed control in the turf and landscape industry. There are growing concerns about improper use because of the damage it causes on desirable landscape plants. Which of the following plants would Dicamba not cause any damage to?

- A. Ash
- B. Peony
- C. Kentucky Bluegrass
- D. American Linden

29. Which of the following propagation methods is NOT an effective method for conifers?

- A. Seed
- B. Layering
- C. Cuttings
- D. Grafting

30. Which is the best practice to disinfect all tools with _____ to prevent disease transfer?

- A. Bleach (10% solution)
- B. Rubbing alcohol
- C. Used bar oil
- D. Glyphosate

31. Which of the following glazing materials allows the highest light transmittance in greenhouses?

- A. Thinwall polycarbonate
- B. Double pane glass
- C. Fiberglass Reinforced Plastic (FRP)
- D. Single pane glass

32. Which of the following plants would be included in designing a pollinator garden?

- A. Purple coneflower
- B. Crocus
- C. Dusty Miller
- D. Tulip

33. A homeowner calls you about a pesky weed in their lawn. It has triangular shaped stems, yellowish seed head and leaves that are a light green color. They said it seems to grow taller than the grass during the hottest part of the summer. What is the weed they are describing?

- A. Dandelion
- B. Foxtail
- C. Oxalis
- D. Yellow nutsedge

34. The stages of incomplete metamorphosis are:
- A. Egg, larva, nymph
 - B. Egg, nymph, adult
 - C. Egg, 1st instar, pupa, adult
 - D. Egg, adult
35. The parts of the stamen include:
- A. Stigma and style
 - B. Corolla and calyx
 - C. Anther and filament
 - D. Anther and style
36. The fruiting structures of plants in the *Fraxinus* family are called:
- A. Pome
 - B. Samara
 - C. Schizocarp
 - D. Drupe
37. The best chemical control for Creeping Charlie is:
- A. Triclopyr
 - B. Malathion
 - C. Surlflan
 - D. Quinclorac
38. The best type of mulch to promote plant health is:
- A. River rock
 - B. Cocoa bean hulls
 - C. Recycled rubber
 - D. Shredded hardwood
39. On a site that has a steep slope (35%), poor soil, and full sun which plant would be the best option?
- A. Garden mum
 - B. Juniper
 - C. Eastern redbud
 - D. Azalea
40. A homeowner called about brown patches in their lawn. The lawn is irrigated and it seems that no matter how much they water the patches keep getting larger. When tugging on the turf in those areas large patches of the lawn come up. What is most likely the cause of this?
- A. White grub
 - B. Dollar spot
 - C. Aphid
 - D. Snow mold

41. A few advantages to planting bare root trees and shrubs are:
- A. better form, easier to plant, and easier to store
 - B. cheaper, easier to plant, and suffer less transplant shock
 - C. easier to water, cheaper, and easier to store
 - D. suffer less transplant shock, able to plant sooner, and better form
42. _____ spent blooms will encourage annuals to re-bloom:
- A. Mulching
 - B. Tapering
 - C. Pinching
 - D. Mowing
43. If a driveway measures 50 feet long in reality, how long will you draw its symbol on a landscape plan using a scale of 1"= 20'?
- A. 5 inches
 - B. 7.25 inches
 - C. 2.5 inches
 - D. 10 inches
44. _____ is a natural phenomenon in which one plant secretes chemicals that inhibit root growth or seed germination of other seeds.
- A. Apical dominance
 - B. Allelopathy
 - C. Bacterial oozing
 - D. Pheromone effect
45. $6 \text{ CO}_2 + 6 \text{ H}_2\text{O} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + 6 \text{ O}_2$ is the balanced equation for:
- A. Respiration
 - B. Transpiration
 - C. Photosynthesis
 - D. Nitrification
46. The soil type with the smallest particle size is:
- A. Clay
 - B. Sand
 - C. Silt
 - D. Caliche
47. Any irrigation system installed after 2003 is required by Minnesota law to have this device installed and operable:
- A. Valve
 - B. Vacuum breaker
 - C. Solenoid
 - D. Rain sensor

48. In a greenhouse a _____ is an easy way to add liquid fertilizer to a water source when watering plants.

- A. Siphoning proportioner
- B. Mist nozzle
- C. Pump sprayer
- D. Quick coupler

49. An example of an organic, soilless component would be:

- A. Perlite
- B. Pumice
- C. Sand
- D. Peat

50. Adding a _____ to an herbicide mixture will increase its spreading and wetting capabilities.

- A. substrate
- B. surfactant
- C. defoamer
- D. ester

2019 Nursery Exam Key:

- | | |
|------|------|
| 1 B | 45 C |
| 2 A | 46 A |
| 3 C | 47 D |
| 4 B | 48 A |
| 5 B | 49 D |
| 6 C | 50 B |
| 7 B | |
| 8 B | |
| 9 B | |
| 10 B | |
| 11 D | |
| 12 B | |
| 13 D | |
| 14 B | |
| 15 A | |
| 16 B | |
| 17 A | |
| 18 C | |
| 19 A | |
| 20 B | |
| 21 A | |
| 22 B | |
| 23 C | |
| 24 D | |
| 25 C | |
| 26 B | |
| 27 B | |
| 28 C | |
| 29 B | |
| 30 B | |
| 31 D | |
| 32 A | |
| 33 D | |
| 34 B | |
| 35 C | |
| 36 B | |
| 37 A | |
| 38 D | |
| 39 B | |
| 40 A | |
| 41 B | |
| 42 C | |
| 43 C | |
| 44 B | |