

## 2008 Iowa FFA Nursery/Landscape CDE General Knowledge Exam

Name \_\_\_\_\_

Contestant Number \_\_\_\_\_

Chapter Post Office \_\_\_\_\_

### Multiple Choice

*Identify the letter of the choice that best completes the statement or answers the question.*

- \_\_\_\_\_ 1. Perennials are transplanted in the \_\_\_\_\_.  
a. winter and summer  
b. fall and spring  
c. winter, spring, summer, and fall  
d. summer
- \_\_\_\_\_ 2. The leaves of narrowleaf evergreens may be either \_\_\_\_\_.  
a. simple or compound  
b. needlelike or scalelike  
c. alternate or opposite  
d. all of the above
- \_\_\_\_\_ 3. Which of the following is not a narrowleaf evergreen?  
a. yew  
b. juniper  
c. wisteria  
d. red pine
- \_\_\_\_\_ 4. Which of the following is not a broadleaf evergreen?  
a. holly  
b. magnolia  
c. yew  
d. boxwood
- \_\_\_\_\_ 5. Most of the diseases that affect deciduous shrubs are caused by \_\_\_\_\_.  
a. bacteria and fungi  
b. fertilizer overuse  
c. unfiltered water  
d. ticks and mites
- \_\_\_\_\_ 6. Which ground cover needs moist soil high in organic matter, shade to grow, has a white flower and small, shiny, and green leaves?  
a. Evergreen candytuft  
b. Creeping mahonia  
c. Heath  
d. Wintergreen

- \_\_\_\_\_ 7. Bulbs are more attractive when planted in a \_\_\_\_\_.  
a. pile  
b. zigzag  
c. line  
d. mass
- \_\_\_\_\_ 8. With xeriscaping, plants are grouped together in relation to their \_\_\_\_\_ needs.  
a. fertilizer  
b. soil  
c. sun  
d. water
- \_\_\_\_\_ 9. For new lawns, how many inches of topsoil should be spread over the rough grade subsoil?  
a. ten  
b. four  
c. six  
d. two
- \_\_\_\_\_ 10. What is a good pH level for most grasses?  
a. 7.0 to 7.5  
b. 5.0 to 7.0  
c. 4.5 to 5.0  
d. 6.0 to 6.5
- \_\_\_\_\_ 11. What is the single most important factor in maintaining a good lawn?  
a. proper fertilizing and pH adjustment  
b. proper watering  
c. right amount of sun  
d. weeding on time
- \_\_\_\_\_ 12. When mowing a lawn, how much of the top should be removed at any one mowing?  
a. one-half  
b. one-third  
c. one inch left  
d. three inches left
- \_\_\_\_\_ 13. When watering a new tree, about how many inches of water should be used at each watering to ensure adequate moisture?  
a. one - half inch  
b. one inch  
c. two inches  
d. two and one-half inches  
e. three or more inches

- \_\_\_\_\_ 14. If the tops of bulbs are cut off too soon after digging, \_\_\_\_\_ will be greatly reduced.
- growth
  - hardiness
  - flowering
  - disease resistance
  - stem diameter
- \_\_\_\_\_ 15. Name the type of pruning that causes new shoots to develop from dormant buds, making the plant thicker.
- thinning out
  - renewal pruning
  - root pruning
  - rejuvenation
  - heading back
- \_\_\_\_\_ 16. Specially prepared fertilizers for new lawns contain high levels of what element?
- nitrogen
  - phosphorus
  - potassium
  - iron
  - magnesium
- \_\_\_\_\_ 17. A type of fungus called an \_\_\_\_\_ does not harm the grass but protects it against insect attack.
- fungophyte
  - endophyte
  - thatch
  - mold
  - ectophyte
- \_\_\_\_\_ 18. What term best describes this definition? "planting of individual plants at spaced intervals".
- sodding
  - stolonizing
  - topdressing
  - sprigging
  - disking
- \_\_\_\_\_ 19. As lawns get older or receive more heavy use, a highly needed lawn maintenance activity is soil \_\_\_\_\_ to restore pores in the soil structure.
- stolonizing
  - fertilization
  - watering
  - aeration
  - topdressing

- \_\_\_\_\_ 20. Which of the following does not encourage moss growth and can result in problem areas?
- too much shade
  - wet areas
  - acidic soil conditions
  - too much use of lime
  - poor growth of grass
- \_\_\_\_\_ 21. Of the choices provided, \_\_\_\_\_ use is one of the most important factors in maintaining a good lawn.
- adequate watering
  - aeration
  - weeding
  - proper fertilizer
  - pH adjustment
- \_\_\_\_\_ 22. The best method of the choices provided in preventing diseases (fungus) of lawns is?
- use of slow release fertilizers
  - prevention
  - overseeding in the spring
  - overseeding in the fall
  - infrequent mowing with removal of only 1/3 of the grass blade
- \_\_\_\_\_ 23. Of the choices provided, the best time to apply limes to lawns is?
- spring, if it is dry out
  - spring, if it is wet out
  - later summer to early fall
  - late fall to early winter
  - late winter to early spring
- \_\_\_\_\_ 24. In establishment of lawns, spot sodding is a process in which?
- small plugs or blocks of sod are placed at measured intervals
  - sod is used to patch bare spots in an old lawn
  - sod is used on steep slopes
  - sod is used on terraces
  - strips of sod are planted end to end in rows to fill in bare spots
- \_\_\_\_\_ 25. Which of the following is considered the 'master principle of landscape design'?
- simplicity
  - balance
  - focalization
  - unity
  - scale and proportion

**2008 Iowa FFA Nursery/Landscape CDE General Knowledge Exam**  
**Answer Section**

**MULTIPLE CHOICE**

1. B
2. B
3. C
4. C
5. A
6. D
7. D
8. D
9. C
10. D
11. A
12. B
13. B
14. C
15. E
16. B
17. B
18. D
19. D
20. D
21. D
22. B
23. D
24. A
25. D

**2008 Iowa FFA**  
**Landscape/Nursery CDE**  
**Problem Solving Activity**

**Problem #1:**

Jeff owns a landscape business that specializes in hard wood mulches. He knows that during delivery and in the process of mulching, that the mulch will settle down (compact) 1/3 of what is required. Therefore, 1/3 more mulch is needed to what is calculated as the volume for a particular area. For this problem, a client has a garden bed that is 15 feet wide and 45 feet long. It needs to be mulched to a depth of 6 inches. The red mulch that this client desires is now selling for \$32 per cubic yard (includes delivery). What will be this customers bill (including the 6% sales tax) to mulch that one garden? (remember to include for compaction).

- (a)\$633.17      (b)\$597.33      (c)\$378      (d)\$563.92

D is the answer

**Problem #2:**

Hawcott Lawn and Landscape's crew can install 400 sq. ft. of sod in an 8-hour day, how many hours will be required to install 280 sq. ft.

- (a) 5.6 hrs.      (b) 2.5 hrs.      (c) 3.7 hrs.      (d) 6 hrs.

A is the answer

**Problem #3:**

Your lawn is 110 feet wide and 140 feet long. You wish to apply 3 pounds of grass seed per 1000 square feet of lawn space. How many pounds of the seed must be applied to meet your goal?

- (a) 56.2#      (b)40.3#      (c)46.2#      (d)51.28#

C is the answer

**Problem #4:**

You have a turf area of 100 x 200 sq. ft. You wish to apply 4 pounds of nitrogen per 1000 square feet of lawns you maintain using a 10-6-4 fertilizer. How many pounds of fertilizer are required to fertilize your area?

- (a) 755 lbs.                      (b) 800 lbs.                      (c) 425 lbs.                      (d) 500 lbs.

D is the answer

**Problem #5:**

Mr. Lundberg owns and operates a landscape business in which he has bid a 20 ft. x 24 ft. paver patio. Standard bricks measure 4 x 8 inches, so you'll need about 45 bricks to cover every 10 sq. ft. patio. You will need to order 10% more pavers to allow for breakage. How many bricks will you need?

- (a) 750 bricks                      (b) 2376 bricks                      (c) 2160 bricks                      (d) 3276 bricks

B is the answer

# 2008 Iowa Landscape/Nursery CDE

## Assessment and Solutions Practicum

### Question #1:

What would you use this device for?

- a. drilling through wood
- b. underground wiring
- c. planting bulbs
- d. none of the above

### Question #2

You have an area that is 250 ft long by 115 feet wide. The cost of sodding will be \$1.28 per cubic yard. How much will this area cost to sod?

- a. \$12,266.67
- b. \$4,088.89
- c. \$6,346.37
- d. \$5,356.67

### Question #3

The weed eater is not working properly. What is the likely problem?

- a. no gas
- b. the trigger is broken
- c. no cutting string
- d. the spark plug is fouled

### Question #4

You pay laborers, who plant shrubs, \$.12 per plant, up to 750 plants per day. For all shrubs planted in excess of 750 plants, you pay \$.14 per shrub. Jenny planted 815 shrubs in one day. How much did she make?

- a. \$99.10
- b. \$99.00
- c. \$97.80
- d. \$85.75

### Question #5

You have to buy much for your landscaping and want the mulch to be at a depth of 3 inches. The area that needs to be landscaped is 34 feet by 123 feet. The mulch you are buying is sold in cubic yards. How many cubic yards are needed?

- a. 58.7 cubic yards
- b. 45.2 cubic yards
- c. 38.7 cubic yards
- d. 21.4 cubic yards

**Question #6**

The shrub before you needs to be pruned. When is the best time to prune this shrub?

- a. summer
- b. spring
- c. fall
- d. winter

**Question #7**

What type of graft was used in the example before you?

- a. whip graft
- b. side veneer graft
- c. bud graft
- d. cleft graft

**Question #8**

You have been looking at your flower beds and your plants are starting to grow very thick. You decided to do some propagation by separation and division. What is the structure before you?

- a. rhizome
- b. tuber
- c. corm
- d. bulb

**Question #9**

You have been asked to mix a herbicide solution that will be sprayed on your garden. The garden is 50 feet wide and 65 feet long. The herbicide that you will be using is Veggie-Guard. The herbicide needs to be mixed at a rate of 4 ounces per gallon of water. You are to apply this herbicide at the rate of 1 gallon per 50 square feet. How many ounces of herbicide are needed?

- a. 260 ounces
- b. 156 ounces
- c. 65 ounces
- d. 200 ounces

**Question #10**

You want to add an ornamental tree to your yard. You have looked at many types of trees and have finally chosen one. The example before you best represents what type of ornamental tree.

- a. Magnolia
- b. Flowering Crabapple
- c. Red Oak
- d. Serviceberry

# 2008 Iowa Landscape/Nursery CDE

## Plant Disorders Practicum

### Station #1

1. The plant disorder before you is most likely caused by:
- a) **A nutrient deficiency and/or plant management problem.**
  - b) Environmental conditions.
  - c) A bacterial pathogen.
  - d) A chewing insect.
  - e) A piercing insect.
2. The best recommendation for the management/correction of this disorder would be:
- a. contact insecticide following to the onset of symptoms.
  - b. Addition of ammonium sulfate.**
  - c. A fungicide application prior to the onset of symptoms.
  - d. A systemic insecticide.
  - e. Nothing, let the disorder run its course.

Chlorosis

### Station #2:

3. The plant disorder before you is most likely caused by:
- a) **A piercing/sucking insect.**
  - b) Environmental conditions.
  - c) A nutrient deficiency and/or plant management problem.
  - d) A chewing insect.
  - e) A bacterial pathogen
4. The best recommendation to avoid this disorder would be:
- a) An insecticide prior to the onset of symptoms.
  - b) A insecticide following the onset of symptoms.
  - c) A fungicide application prior to the onset of symptoms.
  - d) Addition of ammonium sulfate.
  - e) Nothing, usually controlled effectively by nature.**

Aphids

### Station #3:

5. The plant disorder before you is:
- a) An egg laying insect pest
  - b) A chewing insect pest.
  - c) A fungal pathogen**
  - d) A nutrient deficiency.
  - e) All the above.

canker

6. The best recommendation for the management/correction of this disorder would be:
- a. An application of a balanced fertilizer in the early spring.
  - b. The addition of potassium to the soil.
  - c. An application of dormant oil sprays in the spring.
  - d. Choose plants adaptable to local growing conditions.**
  - e. A fungicide

**Station #4:**

7. The plant disorder before you is:
- a) fungus attack.
  - b) A grassy plant.
  - c) A broadleaf plant**
  - d) An insect infestation on the foliage
  - e) Both a and c are correct.

Broadleaf Plantain

8. The best recommendation for the management/correction of this disorder would be:
- a) The application of a wide spectrum herbicide.
  - b) An application of a non-selective insecticide.
  - c) An application of a non-selective broadleaf herbicide.
  - d) A post-emergence broadleaf weed killer.
  - e) Application of a selective broadleaf herbicide.**

**Station #5:**

9. The plant disorder before you is most likely caused by:
- a. Environmental conditions (such as weather and humidity).**
  - b. A chewing insect.
  - c. A nutrient deficiency.
  - d. Herbicides.
  - e. None of these are correct.

Powdery mildew

10. The best recommendation to avoid this disorder would be:
- a. Use of an insecticide.
  - b. Irrigation.
  - c. Plant in a non-shaded area with good air circulation.**
  - d. A preventative fungicide after the onset of symptoms.
  - e. The addition of sulfur to the soil.

**2008 Iowa FFA  
Nursery/Landscape CDE**

**Plant Disorders  
Practicum**

# Disorder #1



# Disorder #2



# Disorder #3



# Disorder #4



# Disorder #5

