

Iowa FFA
2012 Floriculture CDE
General Knowledge Examination

1. Which of the following is not one of the four major divisions of the horticulture industry?
 - a. Floriculture
 - b. Pomology
 - c. Arborology
 - d. Landscape and nursery
 - e. None of these

2. Scientists who identify and classify plants are known as:
 - a. Taxonomists
 - b. Herbologists
 - c. Horticulturists
 - d. Gardeners
 - e. Plantidentist

3. What structure underneath the leaf allows the leaf to breathe and/or transpire?
 - a. Stem
 - b. Pistil
 - c. Stoma
 - d. Chloroplasts
 - e. Airopotics

4. Name the two main parts of the external leaf.
 - a. Leaf and stalk
 - b. Blade and stalk
 - c. Petiole and blade
 - d. Petiole and leaf stalk
 - e. Margin and petiole

5. What color in green plants indicates a deficiency of nitrogen?
 - a. Blue
 - b. Purple
 - c. White
 - d. Green
 - e. Yellow

6. What is the percentage of water in a plant?
 - a. 95 percent
 - b. 90 percent
 - c. 85 percent
 - d. 80 percent
 - e. 60 percent

7. Besides carbon monoxide, what is another major air pollutant that can damage or kill plants?
 - a. Carbon dioxide
 - b. Sodium Chlorate
 - c. Potassium Sulfate
 - d. Sulfur dioxide
 - e. Nitrogen Phosphate

8. Why would a greenhouse operator add carbon dioxide to the environment of certain plants?
 - a. Slow down growth rates
 - b. Speed up growth rates
 - c. Control insects
 - d. Stimulates root hairs to become thicker
 - e. Stimulates the development of cambium tissue

9. Growth regulating substances in plants are called?
 - a. Steroids
 - b. Hormones
 - c. Fertilizers
 - d. Nitrates
 - e. Residues

10. A chemical _____ is used to make plants shorter and more compact, thus making the stems more able to support flowers?
 - a. Hormone
 - b. Fertilizer
 - c. Retardant
 - d. Stimulant
 - e. Inhibitor

11. Which of the following is not a prominent plant hormone?
- Auxins
 - Gibberellins
 - Cytokinins
 - Indolebutyric acid (IBA)
 - Inhibitors
12. This hormone is responsible for stimulating cell division.
- Auxins
 - Gibberellins
 - Cytokinins
 - Indolebutyric Acid (IBA)
 - Inhibitors
13. Which of the following is not a recommended method of watering interior plants?
- Keep media constantly dry
 - Drench and let dry
 - Keep media moist
 - Drench and let dry slightly
 - Keep evenly moist
14. Which of the following is the best way to clean the leaves of an indoor plant?
- Use a heavy shower of water
 - Wash with a diluted solution of vinegar and luke warm water
 - Use a fine spray of water
 - Use mayonnaise and warm water
 - Use warm water and baby oils
15. What terms describe a fertilizer that has been coated with plastic and dissolves over a period of time?
- Slow release
 - Water soluble
 - Time encapsulated
 - TSF (timed slowed fertilizer)
 - None of the above

16. Besides mildew, what is the other most common disease of indoor plants?
 - a. Fungus
 - b. Botrytis
 - c. Aphids
 - d. Phytrium
 - e. None of the above

17. Which of the following is not considered to be one of the most commonly used plants in terrariums:
 - a. Cacti
 - b. Succulents
 - c. Woodland plants
 - d. Tropical plants
 - e. Rosaceae

18. In floral design, an arrangement that has equal visual weight is known as?
 - a. Style
 - b. Sameness
 - c. Harmony
 - d. Equality
 - e. Balance

19. Which of the following floral terms best describes the design principle of: "a total look that flows together"?
 - a. Accent
 - b. Harmony
 - c. Massing flowers
 - d. Scale
 - e. Rhythm

20. Which of the following is not considered one of the basic floral design shapes?
 - a. Hogarth Curve
 - b. Crescent
 - c. Horizontal
 - d. Obtuse Angle
 - e. Triangle

21. What tool is used when a feathered carnation corsage is made?
- Wire cutter
 - Florist knife
 - Florist Scissors
 - Florist Pliers
 - Fingers and hands
22. When wiring gladiolus and mums, which wiring method should be used?
- Hook
 - Hairpin
 - Clutchwire
 - Piercing
 - A or B
23. What is not a reason why florists use wire in corsages?
- To hold the flowers in their natural position
 - To hold the flowers in the correct position in the design
 - To make arranging the flowers in the corsage easier
 - To prevent the flower heads from breaking off the natural stems
 - To make adding accessories such as bows easier.
24. Which of the following factors is not considered important in the greenhouse production of poinsettias?
- Maximum sunlight
 - Optimal Temperatures (65 to 75 degrees F)
 - Moisture
 - Ventilation
 - Clay-Loam media
25. When potted mum cuttings are first placed in a growing area, the greenhouse temperature at night should be kept at?
- 67 degrees F
 - 63 degrees F
 - 61 degrees F
 - 54 degrees F
 - 51 degrees F

2012 State Floriculture Career Development Event

Problem Solving Practicum

- One bag of Supergro planting soil contains 8 cubic feet of soil after the soil has been fluffed. How many 3.5" square pots can be filled with one bag of Supergro if the pots are 3" deep?
 - 310 pots
 - 470 pots
 - 141 pots
 - 376 pots
- Bark mulch is to be added to a homeowner's flower bed. The mulch will be spread 4 inches deep. The area to be covered is a 6'x24' bed. Each bag of mulch contains enough to cover 12 square feet 2 inches deep. How many cubic feet of mulch is needed to cover the flower bed with 4 inches of mulch?
 - 432
 - 12
 - 72
 - 48
- Find the cost per plant of treating a crop of 180 geranium plants with Compactall if the following applications are used: 2 gallons of solution, 5 gallons of solution, and 7 gallons of solution. Mixing rate is 1.5 teaspoons per half gallon of water. One gallon of Compactall costs \$250.00.
*1 gallon=768 teaspoons
 - \$0.15 per plant
 - \$0.08 per plant
 - \$3.64 per plant
 - \$0.04 per plant
- Gene's Greenhouse is having a going out of business sale. His regular price list is provided as well as the going out of business flyer. You have decided to purchase one dozen tulip bulbs, three dozen crocus bulbs, twenty 8-inch pots, and five spools of ribbons. What will your total bill be before tax?

Gene's Greenhouse Price List

Tulip Bulbs	\$5.98 per dozen
Crocus Bulbs	\$2.29 per dozen
Daffodil Bulbs	\$7.75 per dozen
Fertilizer	\$10.99 per bag
Potting Soil	\$2.00 per bag
6 Inch Pots	\$3.00 each
8 Inch Pots	\$4.00 each
Ribbon	\$3.00 spool
Garden Tools	\$16.25 per set

Gene's Greenhouse Going Out of Business Flyer



- a. \$80.49
- b. \$33.75
- c. \$107.85
- d. \$97.80

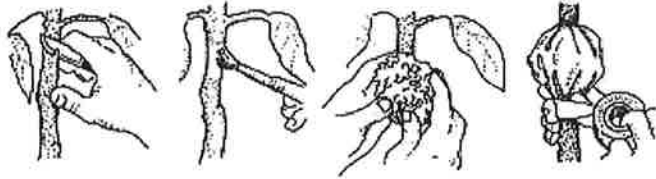
5. Shawna has recorded the following entries in her SAE recordbook. Assuming she had a cash balance of \$521.00 at the beginning of the year, and all income and expense transactions are complete, what is her current cash balance?

Date	Project Code (Identify the SAE project name.)	I= Income E=Expense	Invoice or Check Number	Description	\$ Value (Income or Expense)
1/29	Horticulture	I <u>E</u>		4-inch pots	\$100.64
2/16	Horticulture	I <u>E</u>		Soil	\$70.00
2/27	Horticulture	I <u>E</u>		Seeds	\$51.80
3/6	Horticulture	I <u>E</u>		Fertilizer	\$21.80
4/21	Horticulture	<u>I</u> E		Potted Plant Sales	\$327.50
4/27	Horticulture	<u>I</u> E		Hydroponic Tomato Sales	\$26.75

- a. \$674.61
- b. \$851.01
- c. \$631.01
- d. \$684.51

2012 Iowa FFA
Floriculture CDE
Phase IV – Floriculture Production
50 points – 20 minutes

1. What propagation method is used in the below diagram.



- A. Air grafting
- B. T-bud
- C. Air layering
- D. Cleft graft



2.

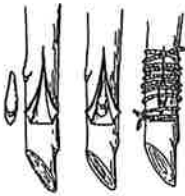
Your greenhouse manager was measuring the pH of your soil mixture with a pH meter. What information can you gather from the above reading?

- A. The pH reads a 7.0 which means that the soil is relatively neutral
- B. The pH reads a 70.0 which means that the soil is relatively neutral
- C. The pH reads a 7.0 which means that the soil is moderately alkaline
- D. The pH reads a 7.0 which means that the soil is extremely acid

3. You have 4 plants in front of you. Which one of the plants would you chose to put in a color installation at Westdale Mall?

4. From the light meter, which of the following houseplants would do the best with the light intensity given?

- A. German Ivy
- B. Rubber Plant
- C. Umbrella Plant
- D. Corton



5. In rose propagation, this method of propagation is widely used. What is this method of propagation called?

- A. Air layering
- B. T-Budding
- C. Cleft grafting
- D. Bench grafting

6. A local young greenhouse manager has a poinsettia crop that is putting on color way too fast. She calls you to ask your advice on how to hold the color of her poinsettia crop for a few more weeks before the poinsettia sale, what advice can you give her?

- A. Turn up the heat to 75° and leave it there
- B. Hold the temperature at 60°
- C. Have the temperature 60° during the day and 70° at night
- D. Keep the temperature at a constant 70°

7. You are contract growing poinsettias for a local retail garden center. They would like 550 poinsettias to sell on December 1. The industry figures a 5% loss, so how many poinsettias would you have to grow to get them their 550 saleable plants.

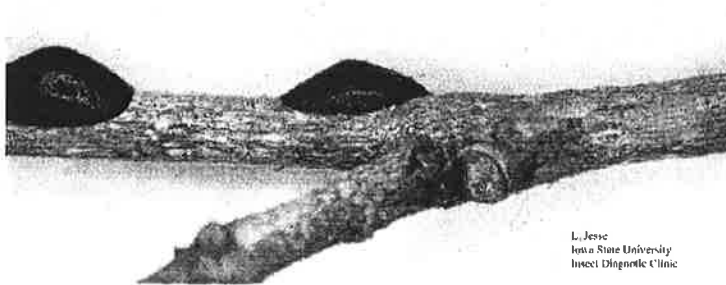
- A. 520
- B. 600
- C. 578
- D. 525

8. _____ is a measure of the total dissolved salt concentration contained in the soil solution and is often used as a measure of the overall nutrition status of the crop.

- A. Media Electrical Conductivity
- B. pH
- C. photosynthesis
- D. Degrees Brix

9. The secondary nutrients that plants need to grow and develop are:

- A. Nitrogen, Phosphorus and Potassium
- B. Calcium, Magnesium and Sulfur
- C. Nitrogen, Magnesium and Zinc
- D. Boron Manganese and Zinc



10.

A customer brought in her *Ficus benjamina* plant. It has these raise spots all over the main stem of the plant. What would you diagnose the problem to be?

- A. Aphids
- B. White Flies
- C. Scale
- D. Thrips