

2012 ND State FFA Floriculture Problem Solving

20 points each

(Please mark all answers on Grademaster card that is provided)

____1. You have an 70 foot long greenhouse with an en-wall area of 240 square feet. You have decided to fumigate utilizing *Methiocarb* PT 1700 aerosol canisters. If each canister will treat a maximum of 2500 CF, how many canisters are required for a single treatment? (CF = Cubic Feet)

- A. 7 Canisters B. 8 Canisters C. 12 Canisters D. 13 Canisters

____2. A six tube hydroponics unit measuring 10 foot length built using 4 inch diameter (Inside) PVC needs to be flooded with disinfectant. The rock filler with in the PVC provides 80% pore space. If there are 7.48 gallons of water in a cubic foot, how many gallons of water will be needed to flood this hydroponic system?

- A. 39.16 B. 31.33 Gallons C. 84.55 Gallons D. 80.62 Gallons

____3. A local Garden Center is running a 15% **Off** Sale on all bedding flowers. Given the following information, Marigolds \$1.89 six-pack; petunias 2.19 six-pack; flowering stock \$2.29 four-pack; Asters , and \$1.69 each. A customer needs 44 Flowering Stock, 22 Asters and 90 Marigolds and 48 petunias. If the sales tax is 6.0%, what is the total cost to the customer? (+/- \$.02)

- A. \$114.74 B. \$89.73 C. \$97.52 D. \$372.88

____4. Your floral shop imports 4 cases of mixed Colombian Standard Carnations. (1 case contains 600 flowers) If the mix is 15% Yellow, 20% Pink, 25% Red, 15% Novelty and the balance of the shipment being White, how many white carnations can be expected in this shipment?

- A. 600 Whites B. 360 Whites C. 300 Whites D. 720 Whites

____5. Your floral shop can purchase roses through a wholesaler for 75 cents each. The shipping and handling charge for these roses is \$8.95 per bunch of 25 flowers. If you retail single roses for \$3.95 each, how much profit is made on 25 roses?

- A. \$89.05 B. \$98.75 C. \$39.05 D. \$71.00

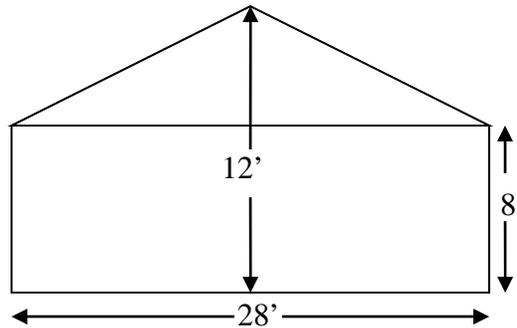
_____6. A business owner has four flower beds into which he plans to till 2 ½ inches of manure before planting. Each of these beds is 3 feet wide and 80 feet long. If sterilized manure sells for \$2.19 per 2 cubic foot bag and sales tax is 6%, what is the total cost of the materials for completion of this phase of the project?

- A. \$464.28 B. \$232.14 C. \$657 D. \$696.42

_____7. A customer wants to purchase Zinia for a half circle flowerbed that has a 16' base. If the planting density for Zinia's is 2.4 plants per square foot, how many six-packs of Zina's will the customer need to purchase?

- A. 68 six-packs B. 135 six-packs C. 81 six-packs D. 41 six-packs

_____8. Before you can establish the size of the ventilation fans that you want to install in your greenhouse you must first find the cubic foot air volume.



If the length of this greenhouse is 64 feet, what is the cubic foot air volume of this greenhouse?

- A. 21,504 cuft. B. 17,920 cuft. C. 14,336 cuft. D. 12,200 cuft.

9. Same plans to produce 500 Boston ferns in 12-inch hanging baskets. What would be his cost for the 12-inch baskets, including 6.0% N.D. sales tax?

Catalog No.		Size	No/Case	Weight/Case	Price/Case	
Green	White				1-19	20-50
H6757-9	H9668-3	6"	50	11 lbs.	\$27.50	\$26.50
H6758-1	H9669-5	8"	50	16 lbs.	\$32.50	\$31.50
H6773-3	H9670-8	8" (fl.)	50	18 lbs.	\$33.75	\$32.50
H6759-3	H9671-0	10"	50	14 lbs.	\$34.25	\$32.95
H6753-1	H9672-2	12"	25	25 lbs.	\$48.95	\$47.25

- A. \$519.87 B. \$945.00 C. \$1,001.70 D. \$1,015.87

10. Assume you have been assigned the task of retail pricing the shipment of roses. Your shop was billed \$828 wholesale for 20 bundles, 36 roses per bundle. Your employer operated on 3.5 to 1 markup on cut flowers. Use the Retailer's Markup Chart to determine the cost per rose and the retail price per dozen. Round up to the nearest \$.001

- A. \$59.00 per dozen: \$4.92 ea. B. \$62.10 per dozen: \$5.18 ea.
 C. \$69.00 per dozen: \$5.75 ea. D. \$23.00 per dozen: \$1.92 ea.

Retailers Markup Chart *

You Pay per flower	100% Markup	150% Markup	200% Markup	250% Markup	300% Markup	350% Markup	400% Markup
0.02	0.48	0.60	0.72	0.84	0.96	1.08	1.20
0.03	0.72	0.90	1.08	1.26	1.44	1.62	1.80
0.04	0.96	1.20	1.44	1.68	1.92	2.16	2.40
0.05	1.20	1.50	1.80	2.10	2.40	2.70	3.00
0.06	1.44	1.80	2.16	2.52	2.88	3.24	3.60
0.07	1.68	2.10	2.52	2.94	3.36	3.78	4.20
0.08	1.92	2.40	2.88	3.36	3.84	4.32	4.80
0.09	2.16	2.70	3.24	3.78	4.32	4.86	5.40
0.10	2.40	3.00	3.60	4.20	4.80	5.40	6.00
0.11	2.64	3.30	3.96	4.62	5.28	5.94	6.60
0.12	2.88	3.60	4.32	5.04	5.76	6.48	7.20
0.13	3.12	3.90	4.68	5.46	6.24	7.02	7.80
0.14	3.36	4.20	5.04	5.88	6.72	7.56	8.40
0.15	3.60	4.50	5.40	6.30	7.20	8.10	9.00
0.16	3.84	4.80	5.76	6.72	7.68	8.64	9.60
0.17	4.08	5.10	6.12	7.14	8.16	9.18	10.20
0.18	4.32	5.40	6.48	7.56	8.64	9.72	10.80
0.19	4.56	5.70	6.84	7.98	9.12	10.26	11.40
0.20	4.80	6.00	7.20	8.40	9.60	10.80	12.00
0.21	5.04	6.30	7.56	8.82	10.08	11.34	12.60
0.22	5.28	6.60	7.92	9.24	10.56	11.88	13.20
0.23	5.52	6.90	8.28	9.66	11.04	12.42	13.80
0.24	5.76	7.20	8.64	10.08	11.52	12.96	14.40
0.25	6.00	7.50	9.00	10.50	12.00	13.50	15.00
0.26	6.24	7.80	9.36	10.92	12.48	14.04	15.60
0.27	6.48	8.10	9.72	11.34	12.96	14.58	16.20
0.28	6.72	8.40	10.08	11.76	13.44	15.12	16.80
0.29	6.96	8.70	10.44	12.18	13.92	15.66	17.40
0.30	7.20	9.00	10.80	12.60	14.40	16.20	18.00

You Pay per Bunch	1.00 Markup	1.50 Markup	2.00 Markup	2.50 Markup	3.00 Markup	3.50 Markup	4.00 Markup
0.50	1.00	1.25	1.50	1.75	2.00	2.25	2.50
0.75	1.50	1.88	2.25	2.63	3.00	3.38	3.75
1.00	2.00	2.50	3.00	3.50	4.00	4.50	5.00
1.25	2.50	3.13	3.75	4.38	5.00	5.63	6.25
1.50	3.00	3.75	4.50	5.25	6.00	6.75	7.50
1.75	3.50	4.38	5.25	6.13	7.00	7.88	8.75
2.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00
2.25	4.50	5.63	6.75	7.88	9.00	10.13	11.25
2.50	5.00	6.25	7.50	8.75	10.00	11.25	12.50
2.75	5.50	6.88	8.25	9.63	11.00	12.38	13.75
3.00	6.00	7.50	9.00	10.50	12.00	13.50	15.00
4.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00
5.00	10.00	12.50	15.00	17.50	20.00	22.50	25.00

*Determine the markup you want to charge, and this chart will give you the selling price per dozen (top chart) or per bunch (bottom chart)

Key

1. A

2. B

3. C

4. A

5. D

6. B

7. D

8. B

9. C

10. B

2012 State Floriculture

NORTH DAKOTA FFA FLORICUTLURE
CAREER DEVELOPMENT EVENT
WRITTEN EXAM (5 POINTS EACH)

Please record all of your answers on the computer scorecard that has been provided. You must use a No. 2 pencil on this card. Please, do not mark any answers on the exam sheets.

1. _____ is any method of breaking through hard, water-impermeable seed coats to allow water to penetrate.
 - a. Seed hydration
 - b. Exacum affine
 - c. Stratification
 - d. Scarification

2. How is the size of a casket spray determined:
 - a. Budget
 - b. Season of the year
 - c. Religious affiliation
 - d. Type of casket

3. Which of the following is not a bulb crop:
 - a. Freesia
 - b. Tulip
 - c. Hyacinth
 - d. Salvia

4. Flowering plants create an attractive seasonal display of color. The _____ is used for its flowering quality.
 - a. Boston Fern
 - b. Azalea
 - c. Chinese Evergreen
 - d. Pothos

5. The floral design of the _____ influence emphasizes careful and significant placement of every flower, branch or leaf.
 - a. Egyptians
 - b. Greeks and Romans
 - c. Japanese
 - d. Italians

6. Flowers are _____ percent water.
 - a. 60
 - b. 90
 - c. 40
 - d. 10

7. Plants convert chemical energy into light energy which results in plant growth.
 - a. true
 - b. false

8. When spores germinate, they form a small _____ leaf like structure known as the prothallus.
 - a. black
 - b. yellow
 - c. green
 - d. brown

9. A gloxinia is classified as a _____.
- a. Permanent foliage potted plant
 - b. Permanent flowering potted plant
 - c. Temporary flowering potted plant
 - d. Temporary foliage potted plant
10. Floral supply companies focus their inventories on hard goods and tools but primarily on fresh flowers and foliage.
- a. true
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11. A horticulture term meaning to be covered with short soft hairs:
- a. Variegated
 - b. Ratoon
 - c. Punctate
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12. The growing point of most dicots is best described as the
- a. Cotyledon
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13. As roots grow, their tips are protected from coarse soil. This accomplished by a mass of cells called the _____.
- a. Root cap
 - b. Adventitious roots
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14. Lilies are _____ bulbs.
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 - b. Non-tunic
 - c. Scales
 - d. Tuber
15. The genus name for croton is
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16. Sympathy flowers are important to _____ the deceased and _____ the living.
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- a. Peat moss
 - b. Perlite
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18. _____ capacity is the measure of a medium's capacity to hold nutrients.
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21. Cyocel or Chlomequat is commonly used

- a. Height retardant
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22. This element is essential for strong stems, strong roots and deep flower color. A deficiency in plants shows up as weak stems and yellowing and browning leaves at their tips and edges:

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2012
State FFA Floriculture Face to Face
Career Development Event
JUDGES SHEET

Daughter is having a wedding reception and you want arrangements for the tables.

Information offered to the contestant:

Daughter eloped to Vegas and was married and now they want to have a wedding reception. Would like garland arrangements to decorate the tables.

Information provided when requested by the contestant:

Really likes **Red Roses**

You want something **Colors are red and black**

Less than **\$50 each**

Need **10** of them.

Long **garland** type of arrangement.

After they ask if there is anything else:

Would also like to get two other arrangements on the same page for the head table.

For: Stacey Rogers

1400 Anywhere Drive

Fargo, ND

701-555-1811

Visa – 8947-2656-6661-9001 Exp. 10/13

Deliver to Holiday Inn; Candle Light Room. June 9th; by 4:30 pm.

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NORTH DAKOTA FFA FLORICUTLURE
CAREER DEVELOPMENT EVENT
WRITTEN EXAM (5 POINTS EACH)

Please record all of your answers on the computer scorecard that has been provided. You must use a No. 2 pencil on this card. Please, do not mark any answers on the exam sheets.

1. _____ is any method of breaking through hard, water-impermeable seed coats to allow water to penetrate.
 - a. Seed hydration
 - b. Exacum affine
 - c. Stratification
 - d. Scarification

2. How is the size of a casket spray determined:
 - a. Budget
 - b. Season of the year
 - c. Religious affiliation
 - d. Type of casket

3. Which of the following is not a bulb crop:
 - a. Freesia
 - b. Tulip
 - c. Hyacinth
 - d. Salvia

4. Flowering plants create an attractive seasonal display of color. The _____ is used for its flowering quality.
 - a. Boston Fern
 - b. Azalea
 - c. Chinese Evergreen
 - d. Pothos

5. The floral design of the _____ influence emphasizes careful and significant placement of every flower, branch or leaf.
 - a. Egyptians
 - b. Greeks and Romans
 - c. Japanese
 - d. Italians

6. Flowers are _____ percent water.
 - a. 60
 - b. 90
 - c. 40
 - d. 10

7. Plants convert chemical energy into light energy which results in plant growth.
 - a. true
 - b. false

8. When spores germinate, they form a small _____ leaf like structure known as the prothallus.
 - a. black
 - b. yellow
 - c. green
 - d. brown

9. A gloxinia is classified as a _____.
- a. Permanent foliage potted plant
 - b. Permanent flowering potted plant
 - c. Temporary flowering potted plant
 - d. Temporary foliage potted plant
10. Floral supply companies focus their inventories on hard goods and tools but primarily on fresh flowers and foliage.
- a. true
 - b. false
11. A horticulture term meaning to be covered with short soft hairs:
- a. Variegated
 - b. Ratoon
 - c. Punctate
 - d. Pubescent
12. The growing point of most dicots is best described as the
- a. Cotyledon
 - b. Internode
 - c. Vascular tissue
 - d. Apical meristem
13. As roots grow, their tips are protected from coarse soil. This accomplished by a mass of cells called the _____.
- a. Root cap
 - b. Adventitious roots
 - c. Secondary roots
 - d. Basal rooters
14. Lilies are _____ bulbs.
- a. Tunic
 - b. Non-tunic
 - c. Scales
 - d. Tuber
15. The genus name for croton is
- a. Sansevieria
 - b. Ficus
 - c. Codiaem
 - d. Araucaria
16. Sympathy flowers are important to _____ the deceased and _____ the living.
- a. grieve, inspire
 - b. grieve, express
 - c. express, remind
 - d. honor, comfort
17. Which of the following is likely to be the most alkaline component of your greenhouse media?
- a. Peat moss
 - b. Perlite
 - c. Pine bark
 - d. Vermiculite
18. _____ capacity is the measure of a medium's capacity to hold nutrients.
- a. Aeration
 - b. Conservatory
 - c. Caution exchange
 - d. Chamber

19. Odd numbers should be used in arrangements when fewer than _____ flowers of one kind are used.

- a. 10
- b. 8
- c. 3
- d. 20

20. Hard-shelled greenhouse pests that suck plant fluids from the stem of many common foliage plants are collectively called:

- a. Mealy bugs
- b. Aphids
- c. Thrips
- d. Scale

21. Cyocel or Chlomequat is commonly used

- a. Height retardant
- b. Stem reinforcer
- c. Pinching agent
- d. Height enhancer

22. This element is essential for strong stems, strong roots and deep flower color. A deficiency in plants shows up as weak stems and yellowing and browning leaves at their tips and edges:

- b. Nitrogen
- c. Phosphorous
- c. Potassium
- d. Iron

23. Wavelengths are measured in _____ with specific wavelengths corresponding to specific _____.

- a. nanometers, color
- b. kilometers, size
- c. centimeters, weight
- d. pedometers, width

24. Factors which enable a floral designer to develop a dominant impact for an event include:

- a. Having dominant plant materials
- b. Adding a focal point or center of interest
- c. Both of the above
- d. None of the above

25. Humidity around indoor plants can be increased by

- a. Spraying fine mist of water on the leaves
- b. Using watertight tray with pea gravel and water around the gravel.
- c. Using a humidifier
- d. All of the above

26. What is a good sign that potted plants need to be repotted?

- a. The plant is becoming tall and lanky
- b. Leaves are turning yellow
- c. New leaves are quite a bit smaller than older ones
- d. New leaves are quite a bit larger than older ones

27. This pathogen attacks a wide variety of ornamental plants, probably causing more losses than any other single pathogen.

- a. Althernariam
- b. Botryis cinerea
- c. Pythium root rot
- d. Phytophthora

28. The pierce wiring technique works best on flowers that have a _____?
- a. Thin calyx
 - b. Limp stem
 - c. Thick calyx
 - d. Fuller bloom
29. The florists' Gloxinia and African violet are members of which plant family
- a. Legume
 - b. Composite
 - c. Gesneriaceae
 - d. Caryophyllaceae
30. This is _____ because it is not held by the root medium.
- a. Root water
 - b. Vitamin water
 - c. Free-water
 - d. Tunic
31. When certain elements are provided in excess to plants, uptake of other nutrients may be hindered. One example of a mineral antagonism is the _____ interactions; a 1:1 ratio is recommended for most floriculture crops.
- a. Hydrogen-Carbon monoxide
 - b. Nitrogen-Potassium
 - c. Hydrogen-Nitrogen
 - d. Potassium-Calcium
32. Photoperiodism is a phytochrome-mediated response.
- a. true
 - b. false
33. The production of a chemical compound by one plant that slows down or stops the growth of another plant.
- a. Biostimulant
 - b. Apical Dominance
 - c. Allelopathy
 - d. Stimulants
34. The point at which the plant is receiving as much light energy as it can use is the _____ point.
- a. light completion
 - b. light saturation
 - c. light compensation
 - d. light fabrication
35. Roses are generally graded according to _____ of stem.
- a. Width
 - b. Fullness
 - c. Length
 - d. Water weight
36. While it cost _____ to produce pinched plants in terms of _____ and _____, the _____ quality is achieved with pinched plants in terms of size, fullness, and flower performance.
- a. Less, fluffiness, production, best
 - b. More, labor, time, highest
 - c. More, production, storage, lower
 - d. Less, labor, time, lowest

37. A symmetrical design will appear to be the same on each side of a _____ center line.
- a. Horizontal
 - b. Squared
 - c. Rectangular
 - d. Vertical
38. Potted plants such as a potted amaryllis can be forced into dormancy by withholding.
- a. Fertilizer
 - b. Light
 - c. Warmth
 - d. Water
39. Most Callas sold today from the United States are three year old true seed hybrids.
- a. true
 - b. false
40. The Easter lily crop is difficult to grow because.....?
- a. Easter falls on a different date each year
 - b. The Easter lily is so very delicate
 - c. The Easter lily can only bloom one week before Easter
 - d. Easter is based on a Christian celebration
41. Floriculture is defined literally as " _____ " but includes florist shops, flower retailers, wholesale florist, production greenhouses and floral supply companies.
- a. culture of flowers
 - b. industry of flowers
 - c. culture of horticulture
 - d. culture of floral arranging
42. _____ is the unit of illumination that equals the light of one candle at a distance of one foot.
- a. Foot-light
 - b. Candle-foot
 - c. Light-foot
 - d. Foot-Candle
43. A tunicate bulb has a dry, papery covering called a _____.
- a. Basal plate
 - b. Scales
 - c. Tunic
 - d. Rhizome
44. The nighttime temperature of indoor plants should be _____ degrees cooler than that of the daytime temperature.
- a. 5 to 10
 - b. 3 to 4
 - c. 20 to 30
 - d. 10 to 15
45. When planting hanging baskets, as a general rule of thumb, you should plant how many plants in the basket?
- a. One more than the size of the basket
 - b. One less than the size of the basket
 - c. One plant
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46. Stratification is the application of a moist chilling treatment of 32 to 50 F (0 to 10 C) to seeds.

- a. true
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47. A perennial bed should be mulched because it_____.

- a. creates aesthetic enhancement
- b. helps control weeds
- c. helps to keep the roots cool
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48. A typical _____ arrangement might contain a fully open flower, half opened flower and a tight bud.

- a. European
- b. South American
- c. Texas
- d. Oriental

49. Caladium is used in the interior landscape for its

- a. Flower
- b. Root size
- c. Leaf color
- d. None of the above

50. Day length (photoperiodism)

- a. stimulates plants to start growing in spring
- b. starts the hardening off process leading to dormancy
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