2019 Iowa FFA Floriculture Test

1. What is the female part of a flower?
    a. Pistil
    b. Stamen
    c. Petal
    d. Sepal

2. Number 1 ribbon is how big?
    a. 2 ¾   b. 1/4   c. 7/8   d. 5/8

3. The best gauge florist wire to use to make a bow is?
    a. 18 gauge
    b. 20 gauge
    c. 14 gauge
    d. 22 gauge

4. Which of the following conducts food from the leaves through the stem to the roots?
    a. Cambium
    b. Sepal
    c. Phloem
    d. Xylem

5. Which of the following would you not use the hook method for when wiring a corsage?
    a. asters
    b. daisy chrysanthemums
    c. black eyed susans
    d. rose

6. Remove the stem _____ inch below the calyx and pierce the calyx halfway down, pulling the wire through to one-half the length of the wire.
    a. 1/8
    b. 1/4
    c. 1/2
    d. 1/5

7. Which of the following is considered a line flower?
    a. rose
    b. bird of paradise
    c. delphinium
    d. protea

8. _____ is created in a floral design when all the parts flow together to give a total, completed look to the arrangement.
    a. Repetition
    b. Rhythm
    c. Unity
    d. Harmony

9. Which of the following in not considered a filler flower?
   a. heather
   b. baby's breathe
   c. wax flower
   d. snapdragons

10. Which is the most common size of florist tape?
    a. 3/4 inch
    b. 1/2 inch
    c. 1/4 inch
    d. 1 inch

11. The height of the floral arrangement is _____to_____ times the height or width of the container.
    a. 1 to 2
    b. 1 1/4 to 1 ½
    c. 1 to 3
    d. 1 ½ to 2

12. Which of the following is NOT used when creating an outdoor Christmas garland?
    a. cedar   b. holly   c. tree fern   d. boxwood

13. A circular design does not have a _____because it is viewed from all sides.
    a. focal point
    b. harmony
    c. balance
    d. unity

14. _____ is used to draw attention in the design.
    a. Repetition   b. Unity   c. Balance   d. Accent

15. To make a pinch bow _____of #9 ribbon is used.
    a. 2 ½ yards
    b. 3 yards
    c. 3 ½ yards
    d. 4 yards

16. Which of the following is used to establish the outer framework of an arrangement?
    a. massing flowers
    b. form flowers
    c. line flowers
    d. filler flowers

17. For the look of _____the flowers in an arrangement must complement each other through color, size, and shape.
    a. rhythm
    b. harmony
    c. unity
    d. scale

18. Scientific names of plants are expressed in Latin because?
    a. It is an international language and was used by the early scholars to express plant names.
    b. It is a dead language.
    c. It is an easy language to learn.
    d. It is easy for all nationalities to pronounce.

19. Which of the following is not considered part of the composite flower?
    a. Disk flower
    b. Ray flower
    c. Petal
    d. Involucre

20. The name of the person who developed the binomial system for naming plants is?
    a. Plato
    b. Socrates
    c. Linnaeus
    d. Hortus

21. Which of the following is not a function of the roots?
    a. Storage of food
    b. Anchoring of plants
    c. Manufacture of food
    d. Absorption of water

22. Which of the following material is considered the easiest to work with when making bows with ribbon?
    a. Cotton
    b. Velvet
    c. Satin
    d. Flocked

23. Which gauge of floral wire will be the thickest?
    a. 32
    b. 26
    c. 24
    d. 20

24. Oasis is _____.
    a. Floral foam
    b. Floral container
    c. Floral shears
    d. Floral wire

25. The green color of the leaves is caused by tiny particles in the food producing cells called?
    a. Chloroplasts
    b. Starch
    c. Guard cells
    d. Epidermis

Key

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

2019 Iowa FFA Floriculture CDE
Floral Production and Management

1. When one thinks of things growing in a greenhouse, does one usually think of flora or fauna?
   a. Flora
   b. Fauna

2. What volume of pesticide should be added to 5 gallons of water if the labeled mixing directions indicate 20 quarts of pesticide per 100 gallons of water?
   a. Five
   b. Ten
   c. One
   d. One Hundred

3. Which one of the following is the main threat of an aphid infestation?
   a. They eat the plant's leaves, with only the petiole, midrib, vein and netted vein remaining.
   b. They suck plant juices out of the leaves, stems, or roots of plants.
   c. They lay eggs on the plants, and their larvae feed on the plants' leaves.
   d. Aphids don't harm plants, they are pollinators and should be protected.

4. Which is the Active Ingredient in the product with the trade name *Sevin*?
   a. 2,4-D
   b. Carbaryl
   c. Imidacloprid
   d. Glyhphosate

5. Which is the predominant herbicide in turf products commonly referred to as "Weed and Feed"?
   a. 2,4-D
   b. Muriatic Acid
   c. Imidacloprid
   d. Glyhphosate

6. Which of the following should be considered when trying to avoid collateral damage from pesticide use?
   a. Wind Speed
   b. Type of pesticide
   c. Neighboring plants and insects
   d. Application rates
   e. All of the above

7. What should your first response be if accidently exposed to a chemical agent?
   a. Immediately call 911
   b. Immediately rinse with soap and water
   c. Immediately consult the "First Aid" portion of the label and proceed accordingly
   d. Do nothing and finish the job, you're tough

8. What environmental conditions are most conducive to spider mite infestations?
   a. Cool temperatures and low humidity
   b. Cool temperatures and high humidity
   c. Warm temperatures and low humidity
   d. Warm temperatures and high humidity

9. Which of the following would be considered biological pest controls?
   a. Bacillus thuringiensis
   b. Parasitic insects
   c. Pyrethrins
   d. A and B above
   e. None of the above

10. Which of the following would likely be an effective treatment for powdery mildew?
    a. Apply a glyhphosate-based product
    b. Apply a sulfur-based product
    c. Apply a pyrethrin-based product
    d. Do nothing, powdery mildew is part of the natural pollination process

11. What should be your primary consideration when determining what pesticide to use and how to use it?
    a. The unwanted pests
    b. The affected plants
    c. Your personal safety and well-being, and that of others around you
    d. The weather

12. Mechanical Control, Biological Control, Chemical Control are associated with what standard approach used to address pest issues?
    a. Interrelated pest management
    b. Intelligent pest management
    c. Interpretive pest management
    d. Integrated pest management

Key

1. A
2. C
3. B
4. B
5. A
6. E
7. C
8. C
9. D
10. B
11. C
12. D

2019 Iowa FFA Floriculture CDE
Problem-Solving/Decision-Making (60 points)

1. You are trying to schedule your workers to plant hanging baskets. You know that each worker can plant 300 plugs per hour. Each 12" basket will contain 5 plugs each. If you need to plant 12,000 12" hanging baskets, how many workers do you need to schedule to finish planting in 5 days? Assume each day is 8 hours.
    a. 5 workers
    b. 12 workers
    c. 3 workers
    d. 6 workers

2. You have 500 poinsettias coming in on July 8th. You want to market your poinsettias on December 9th. You know the production time for this poinsettia variety is 20 weeks. On what day do you need to plant the poinsettias.
    a. August 12
    b. July 15
    c. July 29
    d. You must plant them the day they arrive.

July						
M	T	W	T	F	S	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

August						
M	T	W	T	F	S	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September						
M	T	W	T	F	S	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

October						
M	T	W	T	F	S	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

November						
M	T	W	T	F	S	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

December						
M	T	W	T	F	S	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

3. You are packaging up petunia seeds. Before packaging them you conducted a germination test. You sowed 225 seeds and 189 seeds germinated. If each package needs 420 viable seeds, how many seeds do you need to put in each package?
    a. 525
    b. 425
    c. 650
    d. 500

4. You have 400 ornamental sweet potato vines to sell. You expect a 5% crop loss. If your cost to produce each plant is $1.25, at what price do you need to sell your plants to make a $1,140 profit? (assume you sell each viable plant)
    a. $4.32
    b. $3.00
    c. $2.85
    d. $4.10

5. You have a customer that can fit 1.5 yards of mulch in their truck. The customer has 3 circular beds that are 10 feet in diameter. If they want to apply the mulch 3 inches deep, how many trips will they need to make to haul the mulch?
    a. 1 trip
    b. 2 trips
    c. 3 trips
    d. 4 trips

6. You have a holding tank in which you mix your fertilizer. You need to add half an ounce of fertilizer per gallon of water. Your tank is 3 foot across and 4 feet deep (cylinder shape). How many pounds of fertilizer should you add?
    Please note: there are 16 ounces in one pound & 1 cuft contains 7.48 fluid gallons
    a. 12.2 pounds
    b. 22 pounds
    c. 6.6 pounds
    d. 15.4 pounds

7. You decide to open a small greenhouse in your community. You borrowed enough money to cover rent, utilities, soil, plant material, and advertising for one year. The loan amount is $100,000. In the first year of business you have $138,000 in gross sales and $88,000 in total expenses. If you have similar profits in future years of business, approximately how many years will it take to pay off your loan? (Assume that all interest you owe on the loan is figured into your total expenses and use 100% of the net income toward loan payment.)
    a. 2.5 years
    b. 1 year
    c. 3.5 years
    d. 2 years

8. You have a contractor purchasing some plant material. The contractor gets a 25% discount. Your store loses power, so you must calculate your order by hand. The contractor wants the following plants:

QTY	ITEM	Retail Price
8	Palms	$29.00
12	Premium Annuals	$ 5.00
5	Bags of Soil	$12.00

What would the ticket be with their discount (the contractor is tax exempt)?
   a. $282.48
   b. $264.00
   c. $352.00
   d. $376.64

9. You're ordering soil for your greenhouse operation. Your pots are 4.5 inch squares and are 4 inches tall. How many cubic feet of soil will each pot hold?
   a. 81 cubic feet
   b. .047 cubic feet
   c. 4.5 cubic feet
   d. .026 cubic feet

10. Your local hospital wants to purchase a 12' Fiddle Leaf Fig for their front entry. Your typical mark-up is 40%, but you decide you want to make a $40 profit. What would your selling price be for the Fiddle Leaf Fig if you want to make a $40 profit (Your wholesale price is $118 and shipping cost is 10%)?
   a. $168.00
   b. $140.20
   c. $169.80
   d. $158.00

11. Your FFA Chapter plans to sell fall mums this year. You have 500 sqft of bench space and you know that you need to place your mums 10" on center. How many mums can you grow this year?
   a. 780
   b. 500
   c. 800
   d. 720

12. You need to find out the average cost of your annual plugs. You have the following:

QTY	ITEM	Plug Cost
200	Geraniums	$1.00
20	Petunias	$1.50
100	Marigolds	$1.15

   a. $1.08
   b. $1.50
   c. $1.03
   d. $1.13

2019 Iowa FFA Floriculture CDE
Phase V – Problem-Solving/Decision-Making (60 points)

1. You are trying to schedule your workers to plant hanging baskets. You know that each worker can plant 300 plugs per hour. Each 12" basket will contain 5 plugs each. If you need to plant 12,000 12" hanging baskets, how many workers do you need to schedule to finish planting in 5 days? Assume each day is 8 hours.
   a. 5 workers
   b. 12 workers
   c. 3 workers
   d. 6 workers

300/5 = 60 12" baskets per hour, 12,000/60= 200 man hours, 200 man hours/(8 hrs * 5 days) = 5 employees

2. You have 500 poinsettias coming in on July 8th. You want to market your poinsettias on December 9th. You know the production time for this poinsettia variety is 20 weeks. On what day do you need to plant the poinsettias.
   a. August 12
   b. July 15
   c. July 29
   d. You must plant them the day they arrive.

July						
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12	13	14	15	16	17	18
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October						
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December						
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						1
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9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Count back 20 weeks from December 9th.

3. You are packaging up petunia seeds. Before packaging them you conducted a germination test. You sowed 225 seeds and 189 seeds germinated. If each package needs 420 viable seeds, how many seeds do you need to put in each package?
   a. 525
   b. 425
   c. 650
   d. 500

189/225=.84, 420/.84=500

4. You have 400 ornamental sweet potato vines to sell. You expect a 5% crop loss. If your cost to produce each plant is $1.25, at what price do you need to sell your plants to make a $1,140 profit? (assume you sell each viable plant)
   a. $4.32
   b. $3.00
   c. $2.85
   d. $4.10

400 plants * $1.25 = $500 cost, 400 plants *.95 (viable plants) = 380 to sell, ($1,140+$500 cost)/380= $4.32

5. You have a customer that can fit 1.5 yards of mulch in their truck. The customer has 3 circular beds that are 10 feet in diameter. If they want to apply the mulch 3 inches deep, how many trips will they need to make to haul the mulch?
   a. 1 trip
   b. 2 trips
   c. 3 trips
   d. 4 trips

Circular beds: 5*5*3.14=78.5*3 beds = 235.5
Total Square Footage: 235.5* (3/12)=58.875/27cuft (in one yard) – 2.18 yards required. The truck can fit 1.5 yards, so 2 trips are required.

6. You have a holding tank in which you mix your fertilizer. You need to add half an ounce of fertilizer per gallon of water. Your tank is 3 foot across and 4 feet deep (cylinder shape). How many pounds of fertilizer should you add?
   Please note: there are 16 ounces in one pound & 1 cuft contains 7.48 fluid gallons
   a. 12.2 pounds
   b. 22 pounds
   c. 6.6 pounds
   d. 15.4 pounds

Volume of tank = 1.5 x 1.5 x 3.14 X 4 = 28.26 cu ft x 7.48 gal/cu ft =211.38 gallon
Lbs of fertilizer = 211.38 gal x (.5 oz per gal / 16 oz per pound) = 6.6 pounds

7. You decide to open a small greenhouse in your community. You borrowed enough money to cover rent, utilities, soil, plant material, and advertising for one year. The loan amount is $100,000. In the first year of business you have $138,000 in gross sales and $88,000 in total expenses. If you have similar profits in future years of business, approximately how many years will it take to pay off your loan? (Assume that all interest you owe on the loan is figured into your total expenses and use 100% of the net income toward loan payment.)
    a. 2.5 years
    b. 1 year
    c. 3.5 years
    d. 2 years

$138,000-$88,000 = $50,000 profit, $100,000 borrowed/ $50,000 per year profit = 2 years

8. You have a contractor purchasing some plant material. The contractor gets a 25% discount. Your store loses power, so you must calculate your order by hand. The contractor wants the following plants:

QTY	ITEM	Retail Price
8	Palms	$29.00
12	Premium Annuals	$ 5.00
5	Bags of Soil	$12.00

   What would the ticket be with their discount (the contractor is tax exempt)?
    a. $282.48
    b. $264.00
    c. $352.00
    d. $376.64

(29.00*8) + (5.00*12) + (12.00*5) = 352.00 * .75 (25% discount) = 264.00

9. You're ordering soil for your greenhouse operation. Your pots are 4.5 inch squares and are 4 inches tall. How many cubic feet of soil will each pot hold?
    a. 81 cubic feet
    b. .047 cubic feet
    c. 4.5 cubic feet
    d. .026 cubic feet

4.5*4.5*4=81 cubic inches, 12*12*12= 1728 cubic inches in cubic foot, 81/1728 = .047cuft

10. Your local hospital wants to purchase a 12' Fiddle Leaf Fig for their front entry. Your typical mark-up is 40%, but you decide you want to make a $40 profit. What would your selling price be for the Fiddle Leaf Fig if you want to make a $40 profit (Your wholesale price is $118 and shipping cost is 10%)?
    a. $168.00
    b. $140.20
    c. $169.80
    d. $158.00

$118 x 1.1 (10% shipping), 129.80 + 40 profit = $169.80

11. Your FFA Chapter plans to sell fall mums this year. You have 500 sqft of bench space and you know that you need to place your mums 10" on center. How many mums can you grow this year?
    a. 780
    b. 500
    c. 800
    d. 720

Mums are 10" x 10" = 100 sq inches 100/144 inches/sqft = .694 sqft needed per mum. 500 sqft of bench space/.694 = 720 mums

12. You need to find out the average cost of your annual plugs. You have the following:

QTY	ITEM	Plug Cost
200	Geraniums	$1.00
20	Petunias	$1.50
100	Marigolds	$1.15

    a. $1.08
    b. $1.50
    c. $1.03
    d. $1.13

(200*1.00)+(20*1.5)+(100*1.15)=345/320 plants = $1.08

2019 State Floriculture Event

It's a beautiful sunny June day in Hogsmead. You have many orders to prepare today at Accio Flowers. The deliveries must go out in 40 minutes, work together and work quickly to accomplish your tasks!

- A Bud vase of 2 mini carnations with greenery and a bow, no babies breath, no card.

- A single carnation boutonniere with babies breath and greenery.

- A one sided funeral arrangement of daisies, carnations, peruvian lily, babies breath, and greenery. With a card that reads "Our thoughts and prayers are with you. Love, the Potter Family".

- An all babies breath halo. No blooms, no greenery.

Good luck!