



NATIONAL FFA FLORICULTURE CDE

GENERAL KNOWLEDGE EXAM

Select the best answer for each question and mark your selection on the separate E -
Rubric answer sheet provided. *Mark answers in the General Knowledge Exam section*
on the E -Rubric Answer Sheet.

1. The water -conducting tissue of plants is called _____.
 - a. xylem
 - b. phloem
 - c. peduncle
 - d. pedicel

2. A chemical compound used as an additive to prevent the growth of bacteria in vase water is considered to be a(an) _____.
 - a. acidifier
 - b. biocide
 - c. botrytis
 - d. citric acid

3. Rolling back petals of a flower to create a more open blossom is called _____.
 - a. petalling
 - b. reflexing
 - c. sewing
 - d. tailoring

4. What is a common target date for bracts to develop color and the flowers open?
 - a. September 15
 - b. October 10
 - c. November 15
 - d. December 25

5. A state of equilibrium where both sides of the design are equal.
 - a. asymmetrical design
 - b. symmetrical design
 - c. composition
 - d. form

6. The portion of a design engaged by objects. An area occupied by flowers, foliage, or other objects within a floral design.
 - a. positive space
 - b. negative space
 - c. accent
 - d. focal point

7. The organization of components into a harmonious whole resulting in a cohesive relationship of all parts defines _____.
 - a. unity
 - b. balance
 - c. theme
 - d. harmony

8. Florist wire is sold by gauge. A thin, light wire would be what number gauge?
 - a. 1
 - b. 12
 - c. 22
 - d. 28

9. The secondary colors consist of:
 - a. green, orange, violet
 - b. Violet, blue, red
 - c. yellow, red, blue
 - d. green, yellow, blue

10. Fresh flowers should be stored in a floral cooler at 34-38 degrees F with 80-90% relative humidity.
 - a. True
 - b. False

11. A purlin in greenhouse construction is used for what purpose?
 - a. Frame components spanning the space between the eave and the ridge.
 - b. A panel attached to the greenhouse that permits opening for ventilation.
 - c. A component of the greenhouse frame running the length of the greenhouse just below the roof covering that connects trusses together.
 - d. A component of the greenhouse frame spanning the width of the greenhouse that is welded or bolted together.

12. The essential ingredients for photosynthesis to take place in the plant is:
 - a. Water, oxygen, carbon, light
 - b. Water, carbon dioxide, chlorophyll, light
 - c. Carbon dioxide, glucose, chlorophyll, light
 - d. Oxygen, light, hydrogen, glucose

13. Of the following nutrient list which one includes only micronutrients?
 - a. Zinc, copper, sulfur, phosphorus, boron, calcium, and chlorine
 - b. Manganese, zinc, potassium, calcium, copper, iron, and chlorine
 - c. Iron, nitrogen, sulfur, magnesium, molybdenum, boron, and manganese
 - d. Boron, zinc, copper, molybdenum, iron, manganese, and chlorine

14. Applying too much nitrogen to plants can cause adverse effects on plant growth. Of the following four items which is not a plant's response to excessive nitrogen:
 - a. Weaken the stem because of long and soft growth
 - b. Lower the plant's resistance to disease
 - c. Yellow or light green leaves on the plant
 - d. Lower the quality of the fruit of the plant causing them to be soft to ship

15. The three basic parts of a seed are:
 - a. Seed coat, endosperm, and embryo
 - b. Cotyledons, roots, and seed coat
 - c. Endosperm, roots, and embryo
 - d. Primer, seed coat, and embryo

16. In a flower shop which of the following are not considered overhead expenses?
- Rent or mortgage payment
 - Hard goods
 - Insurance
 - Utilities (water, gas, electricity)
17. Auxin is produced in the shoot tips by a plant. The purpose of auxin in the plant is to:
- Inhibit lateral branch development
 - Start the process of flower development
 - Promote lateral branch development
 - Encourage seed development
18. REI to a greenhouse worker means:
- Reliant environmental interval
 - Retractant emergency integration
 - Reliable environmental information
 - Restricted entry interval
19. Which pesticide LD50 number listed below is the most toxic?
- LD50 of 5,045
 - LD50 of 45
 - LD50 of 545
 - LD50 of 145
20. An armature in floral arrangements is used:
- To create a framework to hold stems in place
 - To support a floral design container
 - To create a system for transporting floral work
 - To make a flower stem longer

21. If a species has separate plants with each plant having only male flowers or female flowers, the plant is considered _____.
- a. complete
 - b. dioecious
 - c. monoecious
 - d. perfect
22. _____ is a process in which glucose combines with oxygen to produce energy in a form that can be used by plants.
- a. Cohesion
 - b. Photosynthesis
 - c. Respiration
 - d. Transpiration
23. A pesticide label cautions against dermal contact; this means the poison could enter the body by _____.
- a. contact with skin
 - b. ingesting
 - c. inhaling
 - d. transfusion
24. _____ deficiency appears as a marginal yellowing or scorch on the edges of leaves on the lower portion of the plant.
- a. Calcium
 - b. Iron
 - c. Nitrogen
 - d. Potassium
25. Photosynthesis primarily occurs within the _____ inside plant cells.
- a. chloroplast
 - b. golgi apparatus
 - c. nucleus
 - d. vacuole

26. A plant with a species name *macrophylla* could be expected to have _____.
- small leaves
 - large leaves
 - small flowers
 - large flowers
27. The _____ are crescent shaped and are responsible for opening the stomata.
- lenticels.
 - vascular bundles
 - receptacles
 - guard cells
28. Chrysanthemums typically flower in late summer or fall. Their photoperiod category is considered which of the following:
- Day-Neutral Plants
 - Long-Day Plants
 - Short-Day Plants
 - Daily Light Integral Plants
29. _____ are responsible for cell division and differentiation. They are produced in the roots and transported throughout the plant through the xylem.
- Ethylenes
 - Gibberellins
 - Auxins
 - Cytokinins
30. Many daylily, dahlia, and gladiola varieties are polyploid, which means that they have more than one set of _____.
- zygotes
 - chromosomes
 - nuclei
 - scions

31. The pigment _____ produces orange-yellow flowers.
- a. carotene
 - b. chlorophyll
 - c. anthocyanin
 - d. xanthophyll
32. Which of the following plant characteristics belongs to monocots?
- a. netted leaf veins
 - b. scattered vascular bundles
 - c. flower parts in multiples of four or five
 - d. taproot system
33. What are four things growing medium provides for plants?
- a. darkness, food, nutrients, oxygen
 - b. carbon dioxide, disease resistance, sugars, water
 - c. nutrients, oxygen, support, water
 - d. vitamins, organic matter, support, water
34. Most essential elements for plant growth are available to most plants when the soil pH is between _____.
- a. 3.0 to 5.5
 - b. 5.5 and 7.0
 - c. 7.0 to 10.5
 - d. 10.5 to 12.0
35. What is a miniature arachnid that sucks sap from plants?
- a. aphid
 - b. beetle
 - c. mite
 - d. Nematode

36. Poinsettias are very susceptible to root rot diseases caused by *Pythium*, *Rhizoctonia*, and *Thielaviopsis* fungi. How can these disease problems be reduced?
- Apply fungicides when appropriate and adhere to proper watering.
 - Introduce beneficial microorganisms to the greenhouse environment.
 - Provide cooler day temperatures and warmer night temperatures.
 - Use varieties genetically engineered to be resistant to root rot.
37. How are chrysanthemums classified?
- by response group, height, and flower form
 - by response group, speed of rooting, and flower texture
 - by root growth, height, and flower color
 - by root length, leaf size, and flower form
38. Why are Easter lilies a relatively difficult crop to grow?
- Easter falls on a different date each year.
 - They are extremely sensitive to dry medium.
 - They are short-day plants grown in the spring.
 - They have so many pest and disease problems.
39. What is the best explanation why bedding plant seeds are sown in rows?
- to ensure that developing seedlings have good light exposure
 - to keep different plant varieties from becoming intermingled
 - to maintain an organized, attractive seed germination room
 - to reduce the possible spread of disease across an entire flat
40. What are small plants grown in small amounts of medium in divided trays?
- cormels
 - explants
 - liners
 - plugs

41. In pricing retail items, it is important to include additional hard good costs, which would include:
- The floral foam and vase used to construct the arrangement
 - The flowers used to make the design
 - The filler used to complete the design
 - The gas used in the delivery vehicle
42. Fresh goods used to create a retail floral design are typically marked up from wholesale pricing at the following rate:
- 10%
 - 200%
 - 50%
 - 500%
43. As the wholesale price of fresh flowers increased due to supply issues, the resulting price affect was seen by consumers:
- The price of delivery was decreased
 - The price of add-on purchased increased
 - The availability of flowers increased
 - The retail price of flowers increased
44. Which of the following floral products is a seasonal design specifically representing the fall harvest season?
- An evergreen wreath with colorful ornaments
 - A blooming spring bulb in a vase
 - A summer bouquet of sunflowers
 - A cornucopia (horn of plenty) filled with flowers, fruit, and vegetables
45. How could a florist or garden shop offer products that promote a sustainable and environmentally conscientious perspective?
- Offer organically grown plants
 - Sell organic fertilizers
 - Market seasonal and local products
 - All of the above.

46. In response to supply issues for fresh flowers from South America, the following result was by floral retailers in the wholesale cost of fresh goods:
- The price of hard goods decreased
 - The price of flowers increased
 - The price of flowers decreased
 - The shipping costs decreased
47. Which of the following products would be the best choice of tools / materials to adhere fresh flowers in constructing a wristlet corsage:
- Hot Glue
 - Cold Glue
 - Wire
 - Braiding
48. Which life stage is most damaging to ornamental crops from the lepidoptera order of insects?
- Adult
 - Larvae
 - Nymph
 - Egg
49. If a plant is showing a yellowing in the leaves, it is most likely deficient in the nutrient:
- Phosphorus
 - Potassium
 - Zinc
 - Nitrogen
50. When removing thorns from roses, it is important to avoid tearing the outer layer, or bark, which would damage the plants:
- Xylem and phloem
 - Roots
 - Petals
 - Pith



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General Knowledge Exam Key

Question	Answer	Point Value	Standard	Standard	Standard
1.	a	4	PS.02.02.03.c		
2.	b	4	PS.03.05.04.b		
3.	b	4	PS.04.02.02.c		
4.	c	4	PS.03.02.05.c		
5.	b	4	PS.04.02.01.c		
6.	a	4	PS.04.02.01.c		
7.	a	4	PS.04.02.01.c		
8.	d	4	PS.04.02.02.c	CS.03.04.02.c	
9.	a	4	PS.04.02.01.c		
10.	a	4	PS.03.05.04.b		
11.	c	4	PS.03.02.06.b		
12.	b	4	PS.02.02.04.c	PS.02.03.01.c	
13.	d	4	PS.01.03.06.c	PS.01.03.01.c	
14.	c	4	PS.03.03.01.c	PS.01.03.06.c	PS.01.03.03.c
15.	a	4	PS.02.02.06.b		
16.	b	4	ABS.01.01.01.b	CS.02.02.03.b	CRP.03.02.01.a
17.	a	4	PS.02.02.04.c		
18.	d	4	BS.02.04.02.a	CS.03.01.01.c	CS.03.03.04.c
19.	b	4	BS.02.04.01.b	BS.02.04.02.a	CS.03.01.01.c
20.	a	4	PS.04.02.01.c	PS.04.02.02.c	

Question	Answer	Point Value	Standard	Standard	Standard
21.	b	4	PS.03.01.01.b		
22.	c	4	PS.02.03.02.c		
23.	a	4	BS.02.04.02.a	PS.03.03.04.b	CS.03.03.03.b
24.	d	4	PS.01.03.01.c		
25.	a	4	PS.02.03.01.c		
26.	b	4	NRS.01.02.02.b		
27.	d	4	PS.02.02.04.c		
28.	c	4	PS.01.01.01.c		
29.	d	4	PS..02.02.03.c		
30.	b	4	NRS.01.02.02.b		
31.	a	4	PS.02.02.05.c		
32.	b	4	PS.02.02.05.c		
33.	c	4	PS.01.02.01.c		
34.	b	4	PS.01.03.02.c		
35.	c	4	NRS.01.02.03.b		
36.	a	4	NRS.04.02.01.b		
37.	a	4	PS.02.02.05.c		
38.	a	4	PS.03.02.05.c		
39.	d	4	NRS.04.02.01.b		
40.	d	4	PS.03.02.05.c		
41.	a	4	ABS.01.01.01.b		
42.	b	4	ABS.01.01.01.b		
43.	d	4	ABS.01.01.01.b		
44.	d	4	CS.02.02.02.c		

Question	Answer	Point Value	Standard	Standard	Standard
45.	d	4	CS.03.01.01.c		
46.	b	4	CS.02.02.03.b		
47.	b	4	CS.03.04.02.c		
48.	b	4	PS.03.03.01.c		
49.	d	4	PS.01.03.06.c		
50.	a	4	PS.02.02.03.c		