



**2018 National FFA Floriculture
Career Development Event
General Knowledge Exam**



Directions: Select the best answer for each question and mark your selection on the separate scantron sheet provided. *Mark answers in the General Knowledge Exam section on the scantron located in the left side of the scantron.*

1. A circular design does not have _____.
 - a. Balance
 - b. Filler flowers
 - c. A focal point
 - d. Massing flowers

2. Most fungal diseases grow best in _____.
 - a. Dry, arid air
 - b. Low moisture conditions
 - c. High moisture conditions
 - d. Seasons with drought

3. Mums are considered a short-day crop; that is, the plant sets flower buds and blooms only when _____.
 - a. Nights and days are long
 - b. Nights are long and days are short
 - c. Nights are short and days are long
 - d. Nights and days are short

4. During respiration, plants _____.
 - a. Use the sun's energy
 - b. Produce sugars
 - c. Use oxygen
 - d. Form complex compounds

5. If green plants show a _____ color, this suggests a nitrogen deficiency.
 - a. White
 - b. Yellow
 - c. Dark green
 - d. Purple

6. _____ exists when the terminal bud produces hormones that inhibit or prevent the growth of axillary buds on the same shoot.
- Cell dominance
 - Root dominance
 - Atypical dominance
 - Apical dominance
7. Floral foam is sufficiently soaked when _____.
- It changes to a darker shade of green
 - The foam floats back to the top of the water
 - Particles of the foam begin to float in the water
 - Air bubbles are no longer coming out of the foam
8. _____ seeding is when seeds are sown in a separate place from where the plants will eventually grow to maturity.
- Direct
 - Sideways
 - Indirect
 - Top
9. _____ is used to accentuate the flowers and colors used in a design.
- Harmony
 - Unity
 - Accent
 - Repetition
10. _____ are chemicals used to control snails and slugs.
- Fungicides
 - Rodenticides
 - Molluscicides
 - Nematocides
11. Small green insects with piercing mouth parts are _____.
- Aphids
 - Mealybugs
 - Scale
 - Mites

12. The recommended daytime temperature range for indoor plants is _____.
- 60-70° F
 - 55-80° F
 - 60-85° F
 - 50-85° F
13. _____ is one of the basic floral design shapes.
- Fan
 - Diagonal
 - Oval
 - Circular
14. In the list of flowers/materials below, which list is not all line flowers:
- Liatris, gladiolus, snapdragons, cattail
 - Bells of Ireland, carnations, branches, snapdragons
 - Liatris, delphinium, gladiolus, bells of Ireland
 - Foxglove, branches, lupine, cattail
15. Joe placed a box of apples in his flower cooler. The next day he saw some cut flowers looking bad and deteriorating. Could the apples have caused this problem?
- Yes, fruit produces ethylene gas which can cause flowers to senesce.
 - Yes, diseases on fruit are easily transferred to cut flowers causing their deterioration.
 - No, storing fruit in a cooler with cut flowers is never a problem. The flowers deteriorated from some other pathogen,
 - No, the apples could not have caused damage to the cut flowers in such a short time.
16. Floral foam should be hydrated before use in a flower arrangement. Which of these methods is the best for accomplishing the soaking of the foam?
- The foam is forced by weight to be totally immersed in the water
 - The foam is pushed down into the water by hand
 - The foam is allowed to float on the surface until it is soaked
 - The foam is placed in the bottom of a water reservoir one-half of the height of the block of foam

17. A wholesale greenhouse operation has grown 4,250 six inch pots of poinsettias. At the end of the Christmas season, 3,789 pots were sold. The wholesale selling price was \$3.85 per pot. The retail businesses sold the pots of poinsettias for \$6.89. The cost per pot grown was \$2.16 per pot. What was the net return on the poinsettia crop to the greenhouse operation?
- \$14,587.65
 - \$6,403.41
 - \$5,407.65
 - \$11,518.56
18. You work for a retail flower shop in Bloomington, Indiana. You are figuring a bill for a customer. In Bloomington the state sales tax is 5%, the city sales tax is 0.5%, and the county sales tax is 1%. The cost of the arrangement for the customer is \$72.45. What is the total of the customer's bill?
- \$72.45
 - \$72.81
 - \$77.16
 - \$76.07
19. The wire services that a retail flower shop can use are:
- Society of American Florists, FTD, and Teleflora
 - FTD, Teleflora, Florafax, American Floral Services, and Carik
 - Florafax, FTD, American Floral Services
 - American Floral Services, American Academy of Floriculture, Florafax, and Carik
20. In growing potted chrysanthemums, the desirable temperature range for flower bud initiation is:
- 62 to 65 degrees F at night
 - Above 68 degrees F at night
 - 60 to 62 degrees F at night
 - 65 to 68 degrees F at night
21. As a grower you want to use "soft" pesticides for plant pest control. Which group below includes "soft" pesticides?
- Fungicides, bactericides, insect growth regulators
 - Insect growth regulators, botanical insecticides, horticultural oils
 - Horticulture oils, insecticidal soaps, insecticides
 - Miticides, insecticidal soaps, horticulture oils
22. The place in the plant where the process of photosynthesis occurs is:
- In all plant cells
 - In all cells within the leaf
 - In green chloroplasts within cells
 - In cells in the leaf petiole

23. A solenoid valve is used in greenhouses:
- As an electrical device used to control the flow of water in greenhouses
 - As a valve controlled totally by water pressure to cut water on and off
 - As a valve controlled by temperature to cut heat on and off
 - As an electrical shut on and off system for ventilation fans
24. A manometer is used in a greenhouse to measure:
- Water pressure in an irrigation system line
 - Difference between low and high temperature
 - Air pressure between layers of plastic
 - Gas pressure in a gas heater
25. In horticulture, the term "explant" is:
- A cross between cultivars within a species
 - A plant that came from a genetic mutation
 - A plant part other than stem or leaves such as a bulb or corm
 - Small pieces of plant material used in tissue culture
26. In greenhouse plant growing a zero DIF will result in:
- Shorter plants compared to plants grown with a positive DIF
 - Taller plants compared to plants grown with a positive DIF
 - A decrease in how much light a plant receives each day
 - A wide range between daytime and nighttime temperatures in a greenhouse
27. The three secondary colors in flower arrangements are:
- Red, yellow, and blue
 - Orange, green, and violet
 - Purple, yellow, and blue
 - Green, purple, and red
28. The nutrient iron is essential in plants because:
- Iron is required for strong stems
 - Iron is required for leaf formation
 - Iron is required for root development
 - Iron is required to produce chlorophyll
29. _____ buds are found at the base of a leaf petiole and next to the stem.
- apical
 - axillary
 - dominant
 - epidermal

30. A plant with a tunicate bulb is a(n) _____.
- a. peony
 - b. tulip
 - c. iris
 - d. Easter lily
31. Binomial classification of a plant requires a _____ and _____ for the name.
- a. genus and specific epithet
 - b. family and order
 - c. common and scientific component
 - d. species and family
32. A tissue in a seed that provides stored food for the embryo is _____.
- a. endosperm
 - b. zygote
 - c. seed coat
 - d. hypocotyl
33. The process of propagating plants on an agar gel or nutrient medium is known as _____.
- a. grafting
 - b. budding
 - c. micropropagation
 - d. none of the above
34. A florists' wire with a gauge of 18 will be _____ than florists' wire with a gauge of 28.
- a. shorter
 - b. longer
 - c. thinner
 - d. thicker
35. On a financial planning sheet, the costs of the plant materials (i.e. purchase cost of seeds, cuttings, bulbs, etc.) would be examples of _____.
- a. wholesale costs
 - b. overhead costs
 - c. direct costs
 - d. fixed costs

36. Floral preservatives for cut flowers should contain all of the following except _____:
- a. nitrogen fertilizer
 - b. a sugar source
 - c. an acidifier
 - d. a microbicide
37. What type of environment do chrysanthemums require to produce flowers?
- a. short day photoperiod
 - b. long day photoperiod
 - c. cool day temperature regime
 - d. cool night temperature regime
38. Injecting dilute sulfuric acid into the irrigation system during greenhouse production will:
- a. increase the root medium pH
 - b. decrease the root medium pH
 - c. decrease and then increase the root medium pH
 - d. not change root medium pH
39. What are the organelles that capture and process the light that a plant intercepts?
- a. mitochondria
 - b. nuclei
 - c. chlorophylls
 - d. chloroplasts
40. The process of _____ is when a plant loses water through stomates.
- a. transpiration
 - b. translocation
 - c. transduction
 - d. acclimatization
41. Which glazing material for greenhouses allows the lowest light transmittance?
- a. fiberglass
 - b. polyethylene
 - c. double-layer polyethylene
 - d. polycarbonate

42. The calculated difference between the day temperature and night temperature in a greenhouse production situation is known as _____.
- a. HID
 - b. STS
 - c. DIF
 - d. IPM
43. Before using a chemical you should refer to the SDS or
- a. Safety Detail Sheet
 - b. Safety Data Sheet
 - c. Storage Detail Sheet
 - d. Storage Data Sheet
44. The binomial system for naming plants is
- a. used on the North American continent only.
 - b. used only in the United States.
 - c. used Internationally.
 - d. no longer used today.
45. Plants that have two _____ are known as dicots.
- a. nucleus
 - b. cells
 - c. flowers
 - d. cotyledons
46. Chloroplasts contain chlorophyll that _____ green light giving plants their green color.
- a. reflect
 - b. absorb
 - c. produce
 - d. create
47. _____ insecticides are pesticides that are translocated throughout the plant and kill any insects that feed on the plant.
- a. Insecticidal Soaps
 - b. Horticulture Oils
 - c. Botanical
 - d. Systemic

48. When dealing with plant diseases, there must be _____ things present for any plant disease to form.
- a. one
 - b. two
 - c. three
 - d. four
49. _____ plants are plant material kept specifically for the purpose of propagation.
- a. Stock
 - b. Parent
 - c. Cutting
 - d. Hardwood
50. Grasshoppers begin their life cycle as an egg, transition into a larva, and change into an adult. This would be classified as _____ metamorphosis.
- a. complete
 - b. incomplete
 - c. holometabolous
 - d. ametabolous



2018 National FFA Floriculture
Career Development Event
General Knowledge Exam
Answer Key



Number	Answer	Standard(s)
1	c	PS.04.02.01.c.
2	c	PS.01.01.03.c.
3	b	PS.03.02.05.c.
4	c	PS.02.03.02.c.
5	d b	PS.01.03.01.c.
6	d	PS.03.05.01.b.
7	d	PS.04.02.02.c.
8	c	PS.03.02.05.c.
9	d	PS.04.02.01.c.
10	c	PS.03.03.01.c.
11	a	PS.03.03.02.b.
12	d	PS.03.02.05.c.
13	d	PS.04.02.01.c.
14	b	PS.02.02.05.c.
15	a	PS.03.05.04.b.
16	c	PS.04.02.02.c.
17	c	CS.02.02.03.b.
18	c	CRP.02.01.01.c.
19	b	ABS.05.03.02.a.
20	a	PS.03.02.05.c. ; PS.01.01.01.c.
21	b	PS.03.03.01.c.
22	c	PS.02.02.05.c.
23	a	NRS.01.02.05.a.
24	c	NRS.01.02.05.a.
25	d	PS.03.01.03.c.
26	a	PS.01.01.02.c.
27	b	PS.04.02.01.c.
28	d	PS.02.02.04.c.
29	b	PS.03.01.03.c.
30	b	NRS.01.02.
31	a	PS.02.01.02.c.
32	a	PS.03.01.03.b.
33	c	PS.03.01.03.c.
34	d	CRP.10.04.01.c.
35	c	CRP.03.02

36	a	CRP.10.04.01.c.
37	a	PS.01.01.02.c.
38	b	PS.01.03.05.b.
39	d	PS.02.02.03.c.
40	a	PS.02.02.03.c.
41	c	CRP.10.04.01.c.
42	c	ESS.01.01.
43	b	PS.03.03.04.b. ; BS.02.04.02.a.
44	c	NRS.01.02.02.b.
45	d	NRS..01.02.02.b.
46	a	PS.01.01.01.c.
47	d	PS.03.03.01.c.
48	c	PS.03.03.01.c.
49	a	PS.03.01.03.c.
50	b	PS.03.03.02.b.