

FLORICULTURE CDE QUESTION BANK

1. Honeydew on the leaves and ants crawling around a plant indicate:
 - A) Slugs
 - B) Aphids**
 - C) Thrips
 - D) Fungus
2. Fertilization in a flower takes place when:
 - A) Pollen grain touches the stigma
 - B) Pollen grain touches the ovary
 - C) Pollen is released from a flower
 - D) A sperm and egg unite**
3. Vase life is the length of time that:
 - A) A glass vase can be expected to go unbroken
 - B) A flower container remains in style
 - C) Cut flowers usually remain acceptable**
 - D) A plastic vase will remain watertight
4. If a hue is diluted with gray, the resulting color is called:
 - A) Tone
 - B) Shade
 - C) Tint
 - D) Value
5. Which are NOT bedding plants?
 - A) Gloxinias**
 - B) Zinnias
 - C) Marigolds
 - D) Pansies
6. The order of the elements in a 5-10-5 fertilizer analysis is:
 - A) NKP
 - B) NPK**
 - C) KPN
 - D) PNK
7. If a flower arrangement appears to be ready to fall over, it lacks:
 - A) Balance
 - B) Focus
 - C) Rhythm
 - D) Harmony
8. A person is exposed to the highest concentration of a pesticide during:
 - A) Clean equipment
 - B) Reading directions
 - C) Mixing**
 - D) Application

9. It is important not to keep fruit baskets in the same cooler with fresh flowers because:
- A) Fruit flies eat flower petals
 - B) Banana and apples give off an odor that is absorbed by the flowers
 - C) **Ethylene gas from the fruit will cause the flowers to age quickly**
 - D) Florists shouldn't sell fruit – that's the job of the grocery store
10. The stomata of a plant leaf:
- A) Prevent disease organisms from entering the plant
 - B) Regulate nutrient entry from foliar fertilizer applications
 - C) Must open to allow light to reach the chlorophyll for photosynthesis
 - D) **Regulate water vapor loss from the plant**
11. A method of applying pesticides to plants that can be effectively used in greenhouse but not outdoors is:
- A) Spraying
 - B) **Fumigation**
 - C) Dusting
 - D) Soil drenching
12. A flowering pot marketed throughout the year is:
- A) Poinsettia
 - B) Easter Lily
 - C) Geranium
 - D) **Chrysanthemum**
13. To check if a plant needs water, touch the soil with your finger: if the plant needs water the soil will feel:
- A) Cool and moist
 - B) **Dry and warm**
 - C) Gritty
 - D) None of the above
14. The treatment given Easter lilies to speed flowering is called:
- A) Short days
 - B) Long days
 - C) Precooling
 - D) Drying off
15. An explant is:
- A) Plant produced from a tissue (meristem)
 - B) Plant produced from a leaf
 - C) Dead plant
 - D) Weed
16. The word photoperiod has to do with light:
- A) Quality
 - B) **Duration**
 - C) Intensity
 - D) Foot candles

17. A 50 degree F greenhouse crop means that to achieve good crop quality, the crop must be grown:
- A) At a day temperature of 50 degrees
 - B) At a night temperature of 50 degrees
 - C) At a day and night temperature of 50 degrees
 - D) With a day/night temperature difference of 50 degrees
18. A pathogen is:
- A) Nutritional disorder
 - B) Genetically inherited disorder
 - C) Special propagation technique
 - D) **Microorganism that causes a disease**
19. The greenhouse crop that is most responsive to increased levels of CO₂ is:
- A) Rose
 - B) Tomato
 - C) Cucumber
 - D) Geranium
20. When transplanting bedding plant seedlings: they should be handled by the:
- A) Roots
 - B) Stems
 - C) **Leaves**
 - D) Cotyledons
21. An 8/10 azalea is a grade size that refers to:
- A) The pot size
 - B) The root/shoot ratio
 - C) The date on which it was propagated
 - D) A range in inches of diameter of the top of the plant
22. The following florist crops are propagated by cuttings:
- A) Hydrangea, Easter lily, rose, orchid
 - B) Snapdragons, stock, Boston yellow daisy, gardenia
 - C) African violet, cut leaf philodendron, English ivy, Sprenger's asparagus fern
 - D) Carnation, chrysanthemum, poinsettia, azalea
23. The following annual flowers are often grown as hanging basket plants:
- A) **Petunias, impatiens, fuschias, browallia**
 - B) Marigold, zinnia, snapdragon, salvia
 - C) Creeping fig, asparagus fern, English ivy, kangaroo vine
 - D) Dwarf tomato, dwarf cucumber, parsley, strawberry
24. Green plants manufacture sugar in the presence of sunlight. This process is called:
- A) Transpiration
 - B) **Photosynthesis**
 - C) Respiration
 - D) Krebs cycle

25. The word photoperiod has to do with light:
- A) Intensity
 - B) Foot candles
 - C) Duration**
 - D) Quality
26. Hydrangeas are forced for the following holidays:
- A) Thanksgiving, Christmas, Valentine's Day
 - B) Memorial Day, July 4th, Labor Day
 - C) Easter, Mother's Day, Memorial Day**
 - D) Secretary's Day, Sweetest's Day, President's Day
27. The alstromeria is most closely related to the following plant:
- A) Daffodil
 - B) Easter lily
 - C) Chrysanthemum
 - D) Abutilon
28. A flowering pot plant marketed throughout the year is:
- A) Poinsettia
 - B) Easter lily
 - C) Geranium
 - D) Chrysanthemum**
29. Propagation schedules for bedding plants, (anywhere in the US) are based on a sales period just after:
- A) Memorial Day
 - B) The last spring frost**
 - C) The first fall frost
 - D) Labor Day
30. If pink rose flowers develop a distinctly bluish color, the probable cause is:
- A) Age
 - B) Too much light
 - C) High soil pH
 - D) Low temperature
31. Systemic pesticides control the pest by:
- A) The use of progressively stronger applications of the material
 - B) Dissolving into and being moved by the plant sap**
 - C) Systematically killing younger to older pests
 - D) Preventing insects from molting
32. The primary colors are:
- A) Red, yellow, and blue
 - B) Orange green and violet
 - C) Red, green and blue
 - D) Blue, orange, and violet

33. A zinnia is an example of a flower having a _____ texture
- A) Fine
 - B) Medium
 - C) Shiny
 - D) Coarse**
34. When ordering flowers from a wholesale florist, one should consider the following:
- A) Availability
 - B) Keeping quality
 - C) Price
 - D) All of the above**
35. The most commonly used material for holding flowers is:
- A) Pin point holders
 - B) Frogs
 - C) Chicken wire
 - D) Floral foam**
36. Foliage below the water line should be removed to:
- A) Prevent the leavers from decaying, which fouls the water**
 - B) Prevent photosynthesis
 - C) Prevent leaves from using stored food in the stem
 - D) All of the above
37. Flowers such as roses and carnations should be stored at:
- A) 45-50 degrees F
 - B) 36-40 degrees F
 - C) 30-35 degrees F
 - D) 55-60 degrees F
38. All of the following are cut flowers except:
- A) Gladiolus
 - B) Daisies
 - C) Stock**
 - D) Snapdragons
39. The size of the bow for a corsage should be:
- A) Four inches
 - B) As wide as the corsage is long
 - C) ½ the length of the corsage
 - D) slightly wider than the petals of the corsage
40. Which has the poorest keeping quality and does not last as long as the others?
- A) Huckleberry
 - B) Baker fern
 - C) Salal
 - D) English ivy

41. A pathogen is:
- A) Genetically inherited disorder
 - B) Special propagation technique
 - C) Nutritional disorder
 - D) Micro organism that causes a disease**
42. Florist azaleas are:
- A) Herbaceous perennials
 - B) Bulbs
 - C) Small evergreen shrubs**
 - D) Annuals
43. Which of the following is provided for a plant by its leaves?
- A) Anchorage
 - B) A food factory**
 - C) Shade
 - D) Support
44. The most important cut flower crops in the US are:
- A) Gladiolus, orchids, gardenia
 - B) Mum, rose, carnation
 - C) Rose, snapdragon, gladiolus
 - D) Carnation, rose, orchid
45. The are within a composition occupied by material is called _____
- A) Positive space
 - B) Negative space
 - C) Texture
 - D) Line
46. Systemic pesticides control the pest by:
- A) The use of progressively stronger applications of the material
 - B) Dissolving into and being moved by the plant sap**
 - C) Systematically killer younger to older pests
 - D) Preventing insects from molting
47. The flowers of Easter lilies last longer if:
- A) The pistil is removed
 - B) The stamens are removed
 - C) The plant is kept in a warm place
 - D) It is sold only after the first flower has opened
48. The larger the gauge of florist wire indicates that the thickness is:
- A) Shorter
 - B) Longer
 - C) Thicker

D) Thinner

49. Deluxe floral foam is used to:

- A) Hold soft stemmed flowers
- B) Absorb water quickly
- C) Act as a preservative
- D) Hold heavy stemmed flowers

50. The number of flowers usually in a cymbidium orchid corsage is:

- A) Two
- B) Three
- C) Four
- D) **One**

51. Ridge and furrow greenhouses at all latitudes should be oriented:

- A) **North to South**
- B) East to West
- C) To the builders convenience

52. A powerful and specific inhibitor of ethylene action which delays flower senescence is:

- A) Carbon dioxide gas
- B) Phosphorus
- C) Sulfur
- D) **Silver**

53. The most important environmental factor in orchid culture is:

- A) Fertilization
- B) Temperature
- C) **Watering and water quality**
- D) Light

54. The acceleration of flowering by manipulation of environmental conditions is known as:

- A) Pulsing
- B) **Forcing**
- C) Leaching
- D) After-ripening

55. Mass marketing is the sale of floral products:

- A) In the supermarkets
- B) In high-traffic locations
- C) In large discount stores
- D) **All of the above**

56. Optimum temperatures for poinsettia growth is:

- A) 70-90 degrees
- B) **60-80 degrees**
- C) 50-60 degrees

D) 45-55 degrees

57. Costs associated with making an arrangement, decorating a blooming plant or creating wedding flowers are called:

A) **Direct costs**

B) Indirect costs

C) Fixed costs

D) Overhead

58. Pot mums in 6" pots should average _____ flowering shoots per pot.

A) 5-10

B) **20-30**

C) 60-80

D) 80-100

59. Floral preservatives function to:

A) Provide sugar

B) Supply a bactericide

C) Acidify the solution

D) **All of the above**

60. A grouping of closely spaced flowers, net and accessories in a hand-held floral arrangement is called:

A) Pompon

B) Corsage

C) Hogarthian curve

D) **Nosegay**

61. The optimum pH for azaleas is:

62. 6.5-7.5

63. 9.0-10.0

64. **4.5-5.5**

65. 7.0-8.0

66. Field production of gladiolus is accomplished by using:

A) **Corms**

B) Cuttings

C) Crowns

D) Bulbs

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

A) Pythium root rot

B) **Botrytis cinerea**

C) Alternaria

D) Phytophthora

68. A good substitute for sand, this material provides aeration in the root media.

A) Peat moss

B) **Perlite**

C) Vermiculite

D) Rock wool

69. Distorted flowers characterized by shorter petals, which give the rose a flattened appearance are called:
- A) Flagged
 - B) Bullheads**
 - C) Blind shoots
 - D) Deadheads
70. Most epiphytic orchids can be grown in:
- A) Tree fern-redwood chips
 - B) Osmunda fiber
 - C) Fir bark
 - D) All of the above**
71. Specialty cut flowers may be defined as:
- A) Cut flowers other than carnations, chrysanthemums and gladiolus
 - B) Cut flowers other than roses
 - C) Cut flowers other than roses, carnations and chrysanthemums**
 - D) Cut flowers other than those grown in the field.
72. To obtain blue flowers on hydrangeas, the pH of the growth media should be:
- A) 5.0-5.5**
 - B) 6.0-6.5
 - C) 7.0-7.5
 - D) 4.0-4.5
73. The showy red, pink or white portion of the poinsettia are:
- A) Flowers
 - B) Bracts**
 - C) Petals
 - D) Sepals
74. The growth regulator often used to control marketable plant heights of potted tulips, dahlias and lilies is:
- A) Bonzi
 - B) A-Rest**
 - C) Benlate
 - D) Florel
75. All of the following are bulbous and tuberous-rooted plants except:
- A) Dahlias
 - B) Dutch iris
 - C) Caladiums
 - D) Snapdragons**
76. The majority of florist businesses are conducted in one location and annual gross sales are generally under:
- A) \$2,500,000
 - B) \$250,000**
 - C) \$25,000
 - D) \$2500
77. The unit of heat measurement used in the greenhouse industry is the:

- A) **Btu**
- B) CCM
- C) Ekg
- D) Ocm

78. There are three primary ways that heat is lost in a greenhouse. Which of the following is not correct?

- A) Air leakage
- B) **Solarization**
- C) Conduction
- D) Radiation

79. There are three basic types of pots that are commonly used in the green house industry. Which of the following is not one of the basic types?

- A) **Designer pot**
- B) Standard pot
- C) Azalea pot
- D) Bulb pot or pan

80. The most commonly used growth retardant is called:

- A) **Cycocel**
- B) Diazanon
- C) Retoid
- D) Slow Grow

81. Flowers, which are worn by men and pinned on a lapel are called:

- A) Falcon corsage
- B) Hand-tied bouquet
- C) **Boutonnieres**
- D) Pot pourri corsage

82. A component of greenhouse root media consisting of siliceous volcanic rock, crushed and heated to 1800 degree F is:

- A) Vermiculite
- B) Rockwood
- C) Calcined
- D) **Perlite**

83. This growth regulator increases the flower size of geranium and accelerates flowering in cyclamen:

- A) Auxin
- B) **Gibberellic acid**
- C) B-Nine
- D) Ethephon

84. A more expensive decorative container into which a potted plant can be set is a:

- A) **Jardinière**
- B) Quick sleeve
- C) Vase
- D) Rose bowl

85. Analogous color harmony utilizes:

- A) A combination of the primary and secondary colors

- B) Two colors directly opposite each on the color wheel
- C) Tints, shades and tones of one hue
- D) Two or three adjacent colors on the color wheel**

86. The genus and species name for the carnation is:

- A) Dianthus caryophyllus**
- B) Lathyrus odoratus
- C) Anemone coronaria
- D) Lobularia maritime

87. When doing the flowers for a wedding you may work with all but one of the following arrangements:
Which arrangement would not be suitable for a wedding?

- A) Cascade bouquet arrangement
- B) Kneeling bench arrangement
- C) Two-tiered guest table arrangement
- D) Full couch spray arrangement**

88. Certain plants are quite suitable for use in terrariums. Which, if any, of the following are suitable for this use:

- A) Creeping fig
- B) Needlepoint ivy
- C) None of the above
- D) All of the above**

89. Cycocel or chlormequat, is a commonly used:

- A) Height enhancer
- B) Height retardant**
- C) Pinching agent
- D) Growth promoter

90. These summer-blooming perennials produce dense, bristly balls of blue color:

- A) Delphinium
- B) Blue plumbago
- C) Bleeding heart
- D) Globe thistle**

91. When growing orchids, a hygrometer is used to measure:

- A) Temperature
- B) Light
- C) Air flow
- D) Humidity**

92. The most popular orchid potting material is:

- A) Osmunda fiber
- B) Firbark**
- C) Tree fern fiber
- D) Lava rock

93. Excessively short stems in tulips planted outdoors are due to:

- A) Lack of sunlight
- B) Warm spring temperatures and lack of winter cooling**

- C) Excessive moisture
- D) Magnesium and calcium deficiencies

94. There are numerous advantages to having a container garden. Which of the following, if any, are such advantages:

- A) Containers are mobile
- B) Plants can be spotlighted via their placement
- C) You can enjoy plants where a dirt garden is impossible
- D) **All of the above**

95. A physiological disorder of geraniums caused by high moisture levels in the root media is:

- A) Bacterial blight
- B) Botrytis blight
- C) **Oedema**
- D) Pythium

96. Upper leaves which show interveinal chlorosis probably suffer from:

- A) Lack of water
- B) A sulfur deficiency
- C) **An iron deficiency**
- D) A nitrogen deficiency

97. Marigold seed which fails to emerge, or seedlings which die soon after emerging: from wet soil are the result of:

- A) **Damping off**
- B) Cutworm
- C) Whitefly damage
- D) Foliar nematodes

98. The flowers and leaves of a rose are mottled and streaked with silver, and dusty black droppings have collected. This damage is indicative of:

- A) Fungus gnats
- B) **Thrips**
- C) Powdery mildew
- D) Scale

99. African violets are typically propagated by:

- A) **Leaf cuttings**
- B) Stem cuttings
- C) Air layering
- D) Root division

100. The most popular mechanics item used to support floral arrangements is:

- A) Waterproof tape
- B) **Floral foam**
- C) Plastic grid
- D) Metal pinpoint

101. The pricing method based on 40% of retail selling price is:

- A) Ratio markup
- B) **Wholesale pricing**

- C) Retail cost of goods
 - D) Nesting pricing
102. Cut branches of evergreen 20-30 inches long are called:
- A) Tips
 - B) Bales
 - C) **Boughs**
 - D) Bunches
103. A device used to measure air pressure between two plastic layers in a greenhouse is called a:
- A) Hygrometer
 - B) Tensionmeter
 - C) **Manometer**
 - D) Barometer
104. The term “texture”, as it applies to plants, includes such adjectives as:
- A) **Fine, medium and bold**
 - B) Smooth, fuzzy and spiny
 - C) Corymb, umbel and panicle
 - D) Entire, serrate, and lobed
105. A garden that uses a complementary color scheme is one that:
- A) Uses flowers in various tints and shades of one color
 - B) Uses colors closely related to one another on the color wheel
 - C) **Uses colors that are opposite to one another on the color wheel**
 - D) Combines all colors
106. Cool colors include color combinations like:
- A) Red, red-orange, orange, yellow-orange, yellow
 - B) **Blue-green, blue, blue-violet and violet**
 - C) Black, white and green
 - D) Yellow, pink and red
107. The kind of garden that shows the least design is:
- A) beds
 - B) borders
 - C) **cottage gardens**
 - D) formal gardens
108. The type of plant that lives for more than two years is:
- A) Annuals
 - B) Biennials
 - C) **Perennials**
 - D) Cuttings
109. The best way to design a border is to:
- A) Mix all plant heights evenly in the border
 - B) Plant the tallest plants in the middle and gradually plant shorter plants toward the edges

- C) Plant the tallest plants in front, medium height plants in the middle and shortest plants in the back
- D) Plant the shortest plants in front, medium height plants in the middle and tallest plants in the back**
110. When planning on which plants to plant in your garden, you need to know which climatic zones a plant will grow in. Which climatic zones is the Houston, TX area in?
- A) 4 and 5
- B) 6 and 7
- C) 8 and 9**
- D) 10 and 11
111. The reason for putting irregularly shaped stones, or broken pieces of pottery into the bottom of a pot containing flowering plants is:
- A) They let air into the pot from the bottom
- B) They allow the roots to grow out of the bottom of the pot
- C) It helps the soil to drain after being watered**
- D) Its just an old tradition passed down from person to person and des not help the plants
112. The best kind of soil to plant flowers in is:
- A) Sand
- B) Silt
- C) Clay
- D) Loam**
113. What is the purpose of 'pinching' plants?
- A) Pinching is the removal of dead flowers
- B) Pinching helps the plant to become more bushy**
- C) Pinching helps the plant by requiring less fertilizer
- D) Pinching is the removal of large insects, such as beetles
114. This element is essential for strong stems, strong roots, and deep flower color. A deficiency in plants shows up as weak stems, and a yellowing and browning of leaves at their tips and edges.
- A) Nitrogen
- B) Iron
- C) Phosphorus
- D) Potassium**
115. The best time to water flowering plants is:
- A) In the morning**
- B) In the middle of the day
- C) In the evening
- D) At night
116. A soil that drains too fast or too slow can best be improved by:
- A) Adding organic matter, such as manure, leaf mold or peat moss**
- B) Adding sand
- C) Adding gypsum
- D) Nothing can fix this kind of soil
117. Most perennial plants grow best in:

- A) Very acid soils
- B) Alkaline soils
- C) Rocky soils
- D) Neutral or slightly acid soils**

118. If seeds are sown out-doors, when is the best time to thin plants?
- A) When they are fully grown
 - B) When they have three sets of leaves
 - C) When they have 2 sets of leaves**
 - D) When they have a single set of leaves
119. Which of the following combinations are shade-tolerant perennials?
- A) Coreopsis, baptisia, oriental poppy, rudbeckia
 - B) Hosta, lobelia, columbine, bleeding heart**
 - C) Daylily, yucca, peony, gaillardia
 - D) Iris, veronica, violet, salvia
120. How many essential nutrients are essential to plant growth and reproduction?
- A) Three
 - B) Four
 - C) Six
 - D) Sixteen**
121. When is the best time to divide a mature chrysanthemum?
- A) When it is about three inches tall in the spring**
 - B) When the plant is not blooming during the summer
 - C) After blooming in the fall
 - D) When it is dormant in the winter
122. If your soil is too acid, you can correct it by:
- A) Adding garden sulfur
 - B) Adding ground limestone**
 - C) Ammonium sulfate
 - D) Ferrous sulfate
123. Most bulbs are planted in the:
- A) Spring
 - B) Summer
 - C) Fall**
 - D) Winter
124. Which of the following are groups of biennial plants?
- A) Coreopsis, English daisy, honesty (silver dollar plant)
 - B) Sweet William, hollyhocks, foxglove
 - C) Forget-me-not, Canterbury-bells, viola
 - D) Veronica, wallflowers, pansies
125. When seedlings grown indoors are moved outdoors, they must be _____ to be able to survive in their new environment.
- A) Pinched
 - B) Deadheaded

- C) Transplanted
 - D) Hardened off
126. Which group of flowering plants benefits from being divided every few years?
- A) Perennials
 - B) Annuals
 - C) Biennials
 - D) Vines
127. Which group of plants are summer to fall flowering?
- A) Yarrow, yucca, coreopsis, gaillardia
 - B) Oriental poppy, rudbeckia, salvia, candytuft
 - C) Physostegia, peonies, iris, columbine
 - D) Daylilies, bleeding heart, ranunculus, butterfly weed
128. When planting bare-root roses, do not:
- A) Prune canes back by about a third of their original length
 - B) Soak the rose in a bucket of water before planting
 - C) Prune the roots**
 - D) Make a mound to spread the roots upon
129. Which of the following are summer blooming plants?
- A) Fritillaria, calla lilies, grape hyacinths
 - B) Gladiolus, anemones, Siberian squill
 - C) Tulips, daffodils, crocus
 - D) Montbrecia, agapanthus, gloriosa lilies**
130. Some flowering plants, known as everlastings, have flowers suitable for drying. They include:
- A) Zinnias, celosia, dahlias
 - B) Statice, petunias, ammobium
 - C) Strawflowers, globe amaranth, bells of Ireland**
 - D) Yarrow, phlox, marigolds
131. When cutting roses to use indoors or to remove spent blossoms:
- A) Make the cut above the first strong, three-leaflet leaf
 - B) Do not leave at least two good leaves of the stem
 - C) Cut directly below the first strong, three-leaflet leaf
 - D) Cut directly below the first strong, five-leaflet leaf**
132. A cutting garden is a plot of land set aside for the purpose of growing flowers for what use?
- A) Outdoor bouquets only
 - B) Commercial florist
 - C) Supermarket florist
 - D) Indoor bouquets only**
133. A correct way to remove mealy bugs from plants is:
- A) Dab each bug with a cotton swab dipping in rubbing alcohol**
 - B) Use a pesticide
 - C) Use a fungicide
 - D) Rinse the leaves with milk

134. Fertilizer that you add to your flowering plants contain the following elements in the correct order:
- A) Potassium, nitrogen, iron
 - B) Nitrogen, phosphorus, potassium**
 - C) Nitrogen, phosphorus, iron
 - D) Nitrogen, potassium, phosphorus
135. Although technically not insects, these tiny pests can work havoc on flowering plants:
- A) Thrips
 - B) Aphids
 - C) Red spider mites**
 - D) Leaf cutting beetle
136. What type of water supply do cut flowers need to transport food and to keep the stems stiff?
- A) Constant water supply**
 - B) Occasional water supply
 - C) Periodic water supply
 - D) Cold water supply
137. Heavy-headed flowers, such as large mums, often bend by the flower head, nearly breaking off. What should be done to temporarily improve this situation?
- A) Use hot glue gun to glue flower head on
 - B) Use string to tie flower head on
 - C) Use wire to tie flower head on
 - D) Insert tooth picks pointed through the bloom into the stem**
138. Which of the following is not a purpose of mulch?
- A) Mulch keeps the ground cool
 - B) Mulch limits the growth of weeds
 - C) Mulch conserves moisture
 - D) None of the above**
139. Most lilies are planted 6-8" below the soil surface. Which type needs to be planted more shallowly?
- A) Tiger lilies
 - B) Madonna lilies**
 - C) Oriental lilies
 - D) Trumpet lilies
140. A _____ has a flower bud within it surrounded by layers of food supply.
- A) Corm
 - B) Rhizome
 - C) True bulb**
 - D) Tuber
141. Which of the following annuals can be propagated by cuttings?
- A) Petunias
 - B) Wax begonias**
 - C) Larkspur
 - D) Cosmos

142. Plants need which part of the visible spectrum for good foliage development?
- A) All of the visible spectrum
 - B) Red
 - C) Green
 - D) Blue**
143. Round nodules or long, irregular highly branched swellings on roots are caused by _____ and block the flow of water and nutrients.
- A) Nematodes**
 - B) White grubs
 - C) Root gall
 - D) Wireworms
144. Abnormally streaked or striped flower petals are a symptom of 'flower breaking'. This problem is common tulips, lilies and gladiolus and is caused by:
- A) Fungi
 - B) Thrips
 - C) Viruses**
 - D) Aphids
145. What is the most important thing to do for bulbs to produce flowers during succeeding years?
- A) Use a fertilizer high in iron
 - B) Use a fertilizer high in phosphorus
 - C) Use a fertilizer high in nitrogen
 - D) Grow a good crop of foliage**
146. Which type of rose has multiple large flowers on a single stem?
- A) Polyanthas
 - B) Floribundas**
 - C) Grandifloras
 - D) Hybrid teas
147. What is a good method to naturalize bulbs in the lawn?
- A) Line them up in rows
 - B) Throw them in the air and plant where they fall**
 - C) Plant them on a checkerboard pattern
 - D) Bulbs cannot be naturalized in the lawn
148. The removal of all side buds to produce a single large bloom on plants such as roses, dahlias, and chrysanthemums is called:
- A) Deadheading
 - B) Pinching
 - C) Dividing
149. What is a good sign that potted plants need to be repotted?
- A) New leaves are quite a bit smaller than older ones**
 - B) New leaves are quite a bit larger than older ones
 - C) Leaves are turning yellow
 - D) The plant is becoming tall and lanky

150. Flowers and foliage can be attacked by these insects and cause colorless streaks and withered flowers.
- A) Aphids
 - B) Red spider mites
 - C) Coddling moths
 - D) Thrips**
151. Perennials cannot be propagated from:
- A) Seeds
 - B) Root cuttings
 - C) Stem cuttings
 - D) None of the above**
152. Most indoor foliage plants need which kind of lighting?
- A) Direct sunlight
 - B) Bright light
 - C) Bright indirect light**
 - D) Medium light
153. Most bulbs are best planted:
- A) In areas with afternoon sun**
 - B) In areas with constant sunlight
 - C) In the heavy shade of buildings, trees and shrubs
 - D) In very moist soil
154. In order to survive in the florist business, an owner/manager must be able to figure out the true value of the product and strive for improvement of the perceived value. This is the essence of:
- A) Discount pricing
 - B) Retail pricing
 - C) Premium pricing
 - D) Profit Pricing**
155. Choosing the right heating system for a particular greenhouse depends on all but one of the following variables. Identify the one that is not applicable:
- A) Climate
 - B) Type of containers**
 - C) Size of greenhouse
 - D) Cost and availability of heating fuel
156. A physiological disorder of geraniums caused by high moisture levels in the root media is:
- A) Bacterial blight
 - B) Botrytis blight
 - C) Oedema**
 - D) Pythium
157. The unit of heat measurement used in the greenhouse industry is the :
- A. Btu**
 - B. CCM
 - C. Ekg

D. Ocm

158. The principle of total compatibility of all parts of an arrangement with each other is termed:
A) Rhythm
B) Texture
C) **Harmony**
D) Proportion
159. There are three primary ways to heat is lost in a greenhouse. Which of the following is not correct?
A) Air leakage
B) **Solarization**
C) Conduction
D) Raidiation
160. Upper leaves which show interveinal chlorosis probably suffer from:
A) lack of water
B) a sulfur deficiency
C) **a iron deficiency**
D) a nitrogen deficiency
161. There are three basic types of pot that are commonly used in the greenhouse industry
162. Which of the following is not one of the basic types?
A) **Designer Pot**
B) Standard Pot
C) Azalea Pot
D) Bulb pot or pan
163. There is an abbreviation for the mathematical difference between the day temperature and the night temperature. Identify that abbreviation:
A) a)DTNT
B) b)DT/NT
C) c)AM-PM
D) **d)DIF**
164. A process used by growers to produce well-branched, compact plants with many flowers is called:
A) A.Stunting
B) B) Compacting
C) **C) Pinching**
D) D) Potting
165. The most commonly used growth retardant is called:
A) **CyCocel**
B) Diazanon
B) Retoid
C) Slow Grow

166. Flowers that are worn by men and pinned on a label are called:
- A. Falcon Corsage
 - B) Hand-tied bouquets
 - C) ***C. Boutonnieres***
167. Cut carnations are classified into two groups:
- A. floral and greenhouse
 - B) **standards and miniatures**
 - C) premium and discount
 - D) none of the above
168. Rooted cuttings of carnations are planted very shallow and are irrigated by ooze tubes or a similar system. The primary reason for this type of watering is to:
- a. control costs
 - B) **not wet the foliage**
 - C) allow the injection of iron
 - D) save time and equipment
169. Flowering azaleas are:
- A) Bulbs
 - B) Annuals
 - C) Small evergreen shrubs
 - D) Herbaceous perennials
170. Carbon dioxide enrichment in greenhouses is used to:
- i. Decrease pant water uptake
 - B. Combat insects
 - C. Increase production
 - D. Maintain a healthier work environment
171. Food is tanslocated implants through a tissue called the:
- A. Phloem
 - B. Xylem
 - C. Cambium
 - D. Cortex
172. Parallel leaf venation, lack of annular rings, and floral parts in multiples of three, are distingusishing characteristics of:
- A. Gymnosperms
 - B. Pteridophytes
 - C. Monocots
 - D. Dicots
173. Pollination occurs when:
- A. A pollen grain adheres to the stigma
 - B. Pollen is released from the flower
 - C. A sperm and egg unite
 - D. A pollen grain touches the ovary

174. The Alstromeria is a:
A. Foliage plant
B. Succulent plant
C. An annual
D. Bulbous plant
175. A bulbous plant in which the main storage organ is an enlarged stem that is enclosed by dry, papery leaf bases, is called a:
A. Bulb
B. Rhizome
C. Corn
D. Stolon
176. Soil is most effectively steamed with aerated steam having a temperature range of:
A. 60-76°C
B. 51-67°C
C. 66-82°C
D. 82-100°C
177. An Azalea that has yellowish new leaves is probably lacking:
A. Copper
B. Boron
C. Iron
D. Zinc
178. A poinsettia crop that is four weeks late in flowering for Christmas was very likely exposed to:
A. A gas leak
B. An herbicide
C. Too much CO₂
D. Lighting at night
179. You would use a Sol U-Bridge to:
A. Determine soil pH
B. Inject fertilizer into a watering system
C. Test for salt content in a medium
D. Determine soil water content
180. Excessive vegetative growth is likely to occur in geraniums:
A. If the pH is too high
B. Under strong sunlight
C. If the nitrogen level is too high
D. Under low temperature conditions
181. Damping-off disease of seedlings is caused by:
A. Bacteria
B. Virus
C. Fungus
D. Fertilizer

182. The greenhouse crop that is most responsive to increased levels of CO₂ is:
A. Rose
B. Cucumber
C. Tomato
D. Geranium
183. Food is manufactured in the leaves of plants when they are exposed to light. This process is called:
A. Translocation
B. Assimilation
C. Photosynthesis
D. Respiration
184. A 'stretched' plant is one that:
A. Has taken too long to reach marketable size
B. Produces flowers beyond its natural flowering time
C. Is a vine
D. Has grown excessively long stems
185. Chrysanthemums and poinsettias are grown commercially under long nights. This is needed to:
A. Promote seedling growth
B. Enhance leaf size and quality
C. Initiate and develop flower bulbs
D. Produce larger, taller plants
186. The length of time from cutting propagation to flowering of African violets is about:
A. Two months
B. Nine months
C. Four months
D. Six months
187. Greenhouse tomato flowers are pollinated:
A. By use of a vibrating machine that shakes the pollen loose
B. By opening the vents in the greenhouse to let honey bees in
C. By placing a large fan right over the crop to throw the pollen all over
D. By themselves because tomatoes are dioecious plants
188. The timing of an Easter Lily crop is complicated because:
A. The earlier the date of Easter, the longer it takes to force them
B. The size of the rooted cuttings determines the date of flowering
C. The seeds germinate irregularly over a long period of time
D. The later the date of Easter, the longer it takes to force them
189. For good germination, seeds of nearly all bedding plants require a propagation medium temperature of:
A. 45-55°F b. 55-65°F c. 65-75°F d. 75-85°F
190. Certain plants produce full size fruit that contains no seeds (examples are cucumbers, tomatoes, watermelon and grapefruit). The term that refers to such fruit is:

- A. Gynoecius
- B. Gynospermatic
- C. Parthenocarpic
- D. Angiospermatic

191. Most greenhouse crops stop growing when the air temperature goes above:
A. 95oF
B. 85oF
C. 90oF
D. 80oF
192. Soil structure refers to:
A. The components of the soil
B. The arrangement of soil particles
C. Both a and b above
D. The size of the soil particles
193. When new plants are produced by means of a few layers of cells removed from a stem top or root, this is referred to as:
A. Apical meristem propagation
B. Stem tip cutting propagation
C. Single eye cutting propagation
D. Apomixes
194. With the exception of the horizontal design, how high in relation to its width should a design be made?
A. 2-1/2 to 3 times the width
B. 2 to 2-1/2 times the width
C. 1-1/2 to 2 times the width
D. 1 to 1-1/2 times the width
195. Focus in floral design refers to:
A. Attraction of the observers eye to a central point
B. A transition from dark to central point
C. Attraction of the observers eyes to the outline form of the arrangement
D. A gradation of sizes of flowers
196. Cut flowers and 'greens' are held in refrigerators at a temperature range of:
A. 40-45°F b. 35-40°F c. 30-32°F d. 45-50°F
197. A floral arrangement should be finished on all sides if it is to be placed:
A. On a mantle
B. On a bookcase
C. Against a wall
D. In front of a mirror
198. When designing a floral arrangement, after the container has been prepared, one should:
A. Establish the focal point
B. Begin filling in
C. Drain out all the water

D. Establish the lines

199. If a hue is diluted with gray, the resulting color is called a:
A. Tone
B. Shade
C. Tint
D. Value
200. The size and arrangement of a greenhouse range is determined by the:
A. Requirements of the crops to be grown
B. Number of buildings to be built
C. Size of individual greenhouses
D. Type of construction used
201. A 'starter solution' for greenhouse tomatoes should be high in:
A. Nitrogen
B. Potassium
C. Phosphorus
D. Copper
202. The following is an analysis for a complete fertilizer for commercial use:
A. 2-1-1
B. 5-10-5
C. 0-45-0
D. 0-20-10
203. The most commonly used heating system for commercial greenhouses is:
A. Electric heat panels
B. Steam or hot water piping
C. Forced hot air
D. Passive solar
204. A 100 pound bag of 6-24-12 fertilizer contains _____ pounds of potash.
A. 6
B. 12
C. 48
D. 24
205. The best growth of most kinds of potted plants is obtained when fertilizer is applied as:
A. A soluble form applied every two weeks
B. A slow release form in the soil mix
C. Constant feed
D. B and C combined
206. A chemical disinfectant used to clean benches, pots and watering devices is:
A. Clorox
B. Malathion
C. Off-Shoot-O
D. None of the above
207. From the safety standpoint, it is best to fumigate a greenhouse:

- A. In early morning
 - B. Around noon
 - C. Right after quitting time
 - D. At midnight
208. Use of the following materials is regulated by both Federal and state laws:
- A. Insecticides, fungicides
 - B. Insecticides, fungicides, miticides
 - C. Insecticides, fungicides, miticides, herbicides
 - D. Insecticides, fungicides, miticides, herbicides, plant growth regulators
209. L D 50 means:
- A. Lethal dose of 50%
 - B. Legal dose of 50%
 - C. 50 lazy daisy plants
 - D. legally drunk at 50
210. Early warning signs of poisoning of humans by a pesticide may include:
- A. Tightness in chest, narrowing pupils, headache
 - B. Numbness in hands and feet
 - C. Turning purple
 - D. Loss of memory
211. An air circulation system in a greenhouse is operated continuously except:
- A. At nighttime hours
 - B. On windy days
 - C. When fan and pad cooling is in use
 - D. When the heating system is on 'full'
212. The ventilators in a greenhouse range should be realigned in:
- A. Early fall, every other year
 - B. Late spring, annually
 - C. mid summer and mid winter annually
 - D. mid summer every five year
213. Employees are paid for only two things:
- A. Being on time and putting in time
 - B. Cheerfulness and productivity
 - C. Resourcefulness and ingenuity
 - D. Productivity and responsibility
214. If you have a work related problem that you do not know how to solve, you should take it to your supervisor:
- A. To complain about it
 - B. For him/her to solve
 - C. With alternative solutions
 - D. After you have tried a solution
215. If a customer you are serving has a complaint, the first thing that you should do is:

- A. Listen very carefully
 - B. Refer it to your supervisor
 - C. Write down his/her name and address
 - D. Ask the customer to wait while you check on what to do
216. Gladioli are:
- A. Seldom used by florists
 - B. Used a 'line' flowers in a floral design
 - C. Come in only two colors
 - D. Poor keepers
217. Overhead costs include everything not accounted for in:
- A. Taxes
 - B. Rebates
 - C. Indirect costs
 - D. Direct costs
218. A florist is most likely to be promptly paid when charged account bills are mailed:
- A. Monthly
 - B. Bi-weekly
 - C. Weekly
 - D. The day after purchase
219. The term "texture", as it applies to plants, includes such adjectives as:
- A) Fine, medium and bold**
 - B) Smooth, fuzzy and spiny
 - C) Corymb, umbel and panicle
 - D) Entire, serrate, and lobed
220. A garden that uses a complementary color scheme is one that:
- A) Uses flowers in various tints and shades of one color
 - B) Uses colors closely related to one another on the color wheel
 - C) Uses colors that are opposite to one another on the color wheel**
 - D) Combines all colors
221. Cool colors include color combinations like:
- A) Red, red-orange, orange, yellow-orange, yellow
 - B) Blue-green, blue, blue-violet and violet**
 - C) Black, white and green
 - D) Yellow, pink and red
222. The kind of garden that shows the least design is:
- A) beds
 - B) borders
 - C) cottage gardens**
 - D) formal gardens
223. The type of plant that lives for more than two years is:
- A) Annuals
 - B) Biennials
 - C) Perennials**

D) Cuttings

224. The best way to design a border is to:

A) Mix all plant heights evenly in the border

B) Plant the tallest plants in the middle and gradually plant shorter plants toward the edges

C) Plant the tallest plants in front, medium height plants in the middle and shortest plants in the back

D) Plant the shortest plants in front, medium height plants in the middle and tallest plants in the back

225. When planning on which plants to plant in your garden, you need to know which climatic zones a plant will grow in. Which climatic zones is the Houston, TX area in?

A) 4 and 5

B) 6 and 7

C) 8 and 9

D) 10 and 11

226. The reason for putting irregularly shaped stones, or broken pieces of pottery into the bottom of a pot containing flowering plants is:

A) They let air into the pot from the bottom

B) They allow the roots to grow out of the bottom of the pot

C) It helps the soil to drain after being watered

D) Its just an old tradition passed down from person to person and des not help the plants

227. The best kind of soil to plant flowers in is:

A) Sand

B) Silt

C) Clay

D) Loam

228. What is the purpose of 'pinching' plants?

A) Pinching is the removal of dead flowers

B) Pinching helps the plant to become more bushy

C) Pinching helps the plant by requiring less fertilizer

D) Pinching is the removal of large insects, such as beetles

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

A) Nitrogen

B) Iron

C) Phosphorus

D) Potassium

230. The best time to water flowering plants is:

A) In the morning

B) In the middle of the day

C) In the evening

D) At night

231. A soil that drains too fast or too slow can best be improved by:

A) Adding organic matter, such as manure, leaf mold or peat moss

- B) Adding sand
 - C) Adding gypsum
 - D) Nothing can fix this kind of soil
232. Most perennial plants grow best in:
- A) Very acid soils
 - B) Alkaline soils
 - C) Rocky soils
 - D) Neutral or slightly acid soils**
233. If seeds are sown out-doors, when is the best time to thin plants?
- A) When they are fully grown
 - B) When they have three sets of leaves
 - C) When they have 2 sets of leaves**
 - D) When they have a single set of leaves
234. Which of the following combinations are shade-tolerant perennials?
- A) Coreopsis, baptisia, oriental poppy, rudbeckia
 - B) Hosta, lobelia, columbine, bleeding heart**
 - C) Daylily, yucca, peony, gaillardia
 - D) Iris, veronica, violet, salvia
235. How many essential nutrients are essential to plant growth and reproduction?
- A) Three
 - B) Four
 - C) Six
 - D) Sixteen**
236. When is the best time to divide a mature chrysanthemum?
- A) When it is about three inches tall in the spring**
 - B) When the plant is not blooming during the summer
 - C) After blooming in the fall
 - D) When it is dormant in the winter
237. If your soil is too acid, you can correct it by:
- A) Adding garden sulfur
 - B) Adding ground limestone**
 - C) Ammonium sulfate
 - D) Ferrous sulfate
238. Most bulbs are planted in the:
- A) Spring
 - B) Summer
 - C) Fall**
 - D) Winter
239. Which of the following are groups of biennial plants?
- A) Coreopsis, English daisy, honesty (silver dollar plant)
 - B) Sweet William, hollyhocks, foxglove
 - C) Forget-me-not, Canterbury-bells, viola
 - D) Veronica, wallflowers, pansies

240. When seedlings grown indoors are moved outdoors, they must be _____ to be able to survive in their new environment.
- A) Pinched
 - B) Deadheaded
 - C) Transplanted
 - D) Hardened off
241. Which group of flowering plants benefits from being divided every few years?
- A) Perennials
 - B) Annuals
 - C) Biennials
 - D) Vines
242. Which group of plants are summer to fall flowering?
- A) Yarrow, yucca, coreopsis, gaillardia
 - B) Oriental poppy, rudbeckia, salvia, candytuft
 - C) Physostegia, peonies, iris, columbine
 - D) Daylilies, bleeding heart, ranunculus, butterfly weed
243. When planting bare-root roses, do not:
- A) Prune canes back by about a third of their original length
 - B) Soak the rose in a bucket of water before planting
 - C) **Prune the roots**
 - D) Make a mound to spread the roots upon
244. Which of the following are summer blooming plants?
- A) Fritillaria, calla lilies, grape hyacinths
 - B) Gladiolus, anemones, Siberian squill
 - C) Tulips, daffodils, crocus
 - D) **Montbrecia, agapanthus, gloriosa lilies**
245. Some flowering plants, known as everlastings, have flowers suitable for drying. They include:
- A) Zinnias, celosia, dahlias
 - B) Statice, petunias, ammobium
 - C) **Strawflowers, globe amaranth, bells of Ireland**
 - D) Yarrow, phlox, marigolds
246. When cutting roses to use indoors or to remove spent blossoms:
- A) Make the cut above the first strong, three-leaflet leaf
 - B) Do not leave at least two good leaves of the stem
 - C) Cut directly below the first strong, three-leaflet leaf
 - D) **Cut directly below the first strong, five-leaflet leaf**
247. A cutting garden is a plot of land set aside for the purpose of growing flowers for what use?
- A) Outdoor bouquets only
 - B) Commercial florist
 - C) Supermarket florist
 - D) **Indoor bouquets only**
248. A correct way to remove mealy bugs from plants is:

- A) **Dab each bug with a cotton swab dipping in rubbing alcohol**
- B) Use a pesticide
- C) Use a fungicide
- D) Rinse the leaves with milk

249. Fertilizer that you add to your flowering plants contain the following elements in the correct order:
- A) Potassium, nitrogen, iron
 - B) Nitrogen, phosphorus, potassium**
 - C) Nitrogen, phosphorus, iron
 - D) Nitrogen, potassium, phosphorus
250. Although technically not insects, these tiny pests can work havoc on flowering plants:
- A) Thrips
 - B) Aphids
 - C) Red spider mites**
 - D) Leaf cutting beetle
251. What type of water supply do cut flowers need to transport food and to keep the stems stiff?
- A) Constant water supply**
 - B) Occasional water supply
 - C) Periodic water supply
 - D) Cold water supply
252. Heavy-headed flowers, such as large mums, often bend by the flower head, nearly breaking off. What should be done to temporarily improve this situation?
- A) Use hot glue gun to glue flower head on
 - B) Use string to tie flower head on
 - C) Use wire to tie flower head on
 - D) Insert tooth picks pointed through the bloom into the stem**
253. Which of the following is not a purpose of mulch?
- A) Mulch keeps the ground cool
 - B) Mulch limits the growth of weeds
 - C) Mulch conserves moisture
 - D) None of the above**
254. Most lilies are planted 6-8" below the soil surface. Which type needs to be planted more shallowly?
- A) Tiger lilies
 - B) Madonna lilies**
 - C) Oriental lilies
 - D) Trumpet lilies
255. A _____ has a flower bud within it surrounded by layers of food supply.
- A) Corm
 - B) Rhizome
 - C) True bulb**
 - D) Tuber
256. Which of the following annuals can be propagated by cuttings?

- A) Petunias
 - B) Wax begonias**
 - C) Larkspur
 - D) Cosmos
257. Plants need which part of the visible spectrum for good foliage development?
- A) All of the visible spectrum
 - B) Red
 - C) Green
 - D) Blue**
258. Round nodules or long, irregular highly branched swellings on roots are caused by _____ and block the flow of water and nutrients.
- A) Nematodes**
 - B) White grubs
 - C) Root gall
 - D) Wireworms
259. Abnormally streaked or striped flower petals are a symptom of 'flower breaking'. This problem is common tulips, lilies and gladiolus and is caused by:
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260. What is the most important thing to do for bulbs to produce flowers during succeeding years?
- A) Use a fertilizer high in iron
 - B) Use a fertilizer high in phosphorus
 - C) Use a fertilizer high in nitrogen
 - D) Grow a good crop of foliage**
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- A) Polyanthas
 - B) Floribundas**
 - C) Grandifloras
 - D) Hybrid teas
262. What is a good method to naturalize bulbs in the lawn?
- A) Line them up in rows
 - B) Throw them in the air and plant where they fall**
 - C) Plant them on a checkerboard pattern
 - D) Bulbs cannot be naturalized in the lawn
263. The removal of all side buds to produce a single large bloom on plants such as roses, dahlias, and chrysanthemums is called:
- A) Deadheading
 - B) Pinching
 - C) Disbudding**
 - D) Dividing
264. What is a good sign that potted plants need to be repotted?

- A) **New leaves are quite a bit smaller than older ones**
 B) New leaves are quite a bit larger than older ones
 C) Leaves are turning yellow
 D) The plant is becoming tall and lanky
265. Flowers and foliage can be attacked by these insects and cause colorless streaks and withered flowers.
 A) Aphids
 B) Red spider mites
 C) Coddling moths
 D) **Thrips**
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 A) Direct sunlight
 B) Bright light
 C) **Bright indirect light**
 D) Medium light
268. Most bulbs are best planted:
 A) **In areas with afternoon sun**
 B) In areas with constant sunlight
 C) In the heavy shade of buildings, trees and shrubs
 D) In very moist soil
269. The term “texture” as it applies to plants, includes such adjectives as _____.
 A) **Fine, medium, and bold**
 B) Smooth, fuzzy and spiny
 C) Corymb, umbel and panicle
 D) Entire, serrate and lobed
270. A garden that uses a complementary color scheme is one that _____.
 A) Uses flowers in various tints and shades of one color
 B) Uses colors closely related to one another on the color wheel
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 D) Combines all colors
271. Cool colors include color combinations like _____.
 A) red, red-orange, orange, yellow-orange, yellow
 B) **blue-green, blue, blue-violet, and violet**
 C) black, white and green
 D) yellow, pink and red
272. The kind of garden that shows the least design is _____.
 A) Beds B) borders C) **cottage gardens** D) formal gardens

273. The type of plant that lives for more than two years is a / an _____.
- A) Annuals B) biennials **C) perennials** D) cuttings
274. The best way to design a border is to _____
- A) Mix all plant heights evenly in the border
 B) Plant the tallest plants in the middle and gradually plant shorter plants towards the edges
 C) Plant the tallest plants in the front, medium heights in the middle and shortest in the back
D) Plant the shortest plants in front, medium in the middle and tallest plant in the back
275. When planning on which plants to plant in your garden, you need to know which climatic zones a plant will grow in. Which climatic zones is the Houston, Texas area in?
- A) 4 and 5 B) 6 and 7 **C) 8 and 9** D) 10 and 11
276. The reason for putting irregularly shaped stones or broken pieces of pottery into the bottom of a pot containing flowering plants is _____.
- A) They let air into the pot from the bottom
 B) They allow the roots to grow out the bottom of the pot
C) It helps the soil to drain after being watered
 D) It is just an old tradition passed down from person to person and does not help the plants
277. The best kind of soil to plant flowers in is _____.
- A) Sand B) Silt C) Clay **D) Loam**
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- A) Pinching is the removal of dead flowers
B) Pinching helps the plants to become bushier
 C) Pinching helps the plant by requiring less fertilizer
 D) Pinching is the removal of large insects such as beetles
279. This element is essential for strong stems, strong roots and deep flower color. A deficiency in plants shows up as weak stems and a yellowing and browning of leaves at their tips and edges.
- A) nitrogen B) Iron C) phosphorous **D) Potassium**
280. The best time to water flowering plants is _____.
- A) **In the morning** B) in the middle of the day C) in the evening
 D) at night
281. A soil that drains too fast or too slow can best be improved by _____.
- A) adding organic matter such as manure, leaf mold or peat moss**
 B) adding sand C) adding gypsum D) nothing can fix this soil
282. Most perennial plants grow best in _____
- A) very acidic soils B) alkaline soils C) rocky soils
D) neutral or slightly acidic soils
283. If seeds are sown out-doors, when is the best time to thin plants?
- A) when they are fully grown B) when they have 3 sets of leaves
C) when they have 2 sets of leaves D) when they have a single set of leaves
284. Which of the following combinations are shade-tolerant perennials?
- A) coreopsis, baptisia, oriental poppy and rudbeckia

- B) hosta, lobelia, columbine and bleeding hearts**
- C) daylily, yucca, peony and garillardia
- D) iris, veronica, violet and salvia

285. When is the best time to divide a mature chrysanthemum?

- A) when it is about 3 inches tall in the spring**
- B) when the plant is not blooming during the summer
- C) after blooming in the fall
- D) when it is dormant in the winter

286. If your soil is acidic, you can correct it by adding _____.

- A) garden sulfur
- B) ground limestone**
- C) ammonium Sulfate
- D) ferrous sulfate

287. Most bulbs are planted in the _____.

- C) fall**
- D) winter
- A) spring
- B) summer

288. Which of the following are groups of perennial plants?

- A) coreopsis, English daisy, honesty (Silver dollar plant)
- B) sweet William, hollyhocks, foxglove**
- C) forget-me-not, Canterbury bells, viola
- D) veronica, wallflowers, pansies

289. When seedlings grown indoors are moved outdoors, they must be ____ to be able to survive in their new environment.

- A) pinched
- B) deadheaded
- C) transplanted
- D) hardened off**

290. Which group of flowering plants benefits from being divided every few years?

- A) perennials**
- B) annuals
- C) biennials
- D) vines

291. Which group of plants blooms from summer to fall?

- A) yarrow, yucca, coreopsis, gaillardia**
- B) oriental poppy, rudbeckia, salvia, candytuft
- C) physostegia, peonies, iris, columbine
- D) daylilies, bleeding hearts, ranunculus, butterfly weed

292. When planting bare-root roses, do not _____.

- A) prune canes back by about 1/3 of their original length
- B) soak the roses in a bucket of water before planting
- C) prune the roots**
- D) make a mound to spread the roots upon

293. Which of the following are summer flowering bulbs?

- A) fritillaria, calla lilies, grape hyacinths
- B) gladiolus, anemones, Serbian squill
- C) tulips, daffodils, crocus
- D) montbrecia, agapanthus, gloriosa lilies**

294. Some flowering plants, known as everlastings, have flowers suitable for drying. They include _____.

- A) zinnias, celosia, dahlias
- B) statice, petunias, ammobium
- C) strawflowers, globe amaranth, bells-of-Ireland**
- D) yarrow, phlox, marigolds

295. When cutting roses to use indoors or to remove spent blossoms _____.

- A) make the cut above the first strong three leaflet leaf
- B) do not leave at least two good leaves on the stem
- C) cut directly below the first strong, three leaflet leaf

D) cut directly below the first strong, 5 leaflet leaf

296. A cutting garden is a plot of land set aside for the purpose of growing flowers for what use?
A) outdoor bouquets only B) commercial florists C) supermarket florist
D) indoor bouquets only
297. A correct way to remove mealy bugs from plants is _____.
A) dab each bug with a cotton swab dipped in rubbing alcohol B) use a pesticide
C) use a fungicide D) rinse the leaves with milk
298. The fertilizer that you add to your flowering plants contains the following elements in the correct order.
A) potassium, nitrogen, iron B) **nitrogen, phosphorous, potassium**
C) nitrogen, phosphorous, iron D) nitrogen, potassium, phosphorous
299. Although technically NOT insects, these tiny pests can work havoc on flowering plants.
A) thrips B) aphids C) **red spider mites** D) leaf cutting bees
E) none of the above
300. What type of water supply do cut flowers need to transport food and to keep the stem stiff?
A) **constant water supply** B) occasional water supply C) periodic water supply
D) cold water supply E) none of the above
301. Heavy headed flowers, such as mums, often bend by the flower head, nearly breaking off. What should be done to temporarily improve this situation?
A) use hot glue to glue the flower head on
B) use string to tie the flower head on C) use wire to tie the flower head on
D) insert tooth picks pointed through the bloom into the stem E) none of the above
302. Which of the following is a purpose of mulch?
A) mulch keeps the ground cool
B) mulch limits the growth of weeds C) mulch conserves moisture **D) all of the above**
E) none of the above
303. Most lilies are planted 6 to 8 inches below the soil surface, Which of the following lilies needs to be planted more shallowly?
A) tiger lilies B) **Madonna lilies** C) oriental lilies
D) trumpet lilies E) none of the above
304. A _____ has a flower bud within surrounded by layers of food supply.
A) corm B) rhizome C) **true bulb** D) tuber E) none of the above
305. Which of the following annuals can be propagated from cuttings?
B) wax begonias C) larkspur D) cosmos A) petunias
E) none of the above
306. Round nodules or long, irregular, highly branched swellings on roots are caused by _____ and block the flow of water and nutrients.
A) **nematodes** B) white grubs C) root galls
D) wireworm E) none of the above
307. Abnormally streaked or striped flower petals are a symptom of “flower breaking”. This problem is common on tulips, lilies and gladiolus and is caused by _____.
A) fungi B) thrips
C) viruses D) aphids E) none of the above
308. What is the most important thing to do for bulbs to produce flowers during succeeding years?
A) use a fertilizer high in iron B) use a fertilizer high in phosphorous

- C) use a fertilizer high in nitrogen **D) grow a good crop of foliage** E) none of the above
309. Which type of rose has multiple large flowers on a single stem? A) polyanthas **B) floribundas**
 C) grandifloras D) hybrid teas E) none of the above
310. What is a good method to naturalize bulbs in the lawn? A) line them up in rows
B) throw them in the air and plant them where they fall C) plant them in a checkerboard pattern
 D) bulbs cannot be naturalized in a lawn E) none of the above
311. The removal of all side buds to produce a single large bloom on plants such as roses, dahlias and chrysanthemums is called _____. A) deadheading B) pinching
C) disbudding D) dividing E) none of the above
312. What is a good sign that potted plants need to be repotted?
A) new leaves are quite a bit smaller than old ones
 B) new leaves are quite a bit larger than older ones
 C) leaves are turning yellow D) the plant is becoming tall and lanky E) none of the above
313. Flowers and foliage can be attacked by these insects which will cause colorless streaks and withered flowers. These insects are _____. A) aphids B) red spider mites
 C) codling moths **D) thrips** E) none of the above
314. Perennials can be propagated from _____. A) seeds B) root cuttings C) stem cuttings
D) all of the above E) none of the above
315. Most indoor foliage plants need which of the following kind of light? A) direct sunlight
 B) bright light **C) bright, indirect sunlight** D) medium light E) none of the above
316. Most bulbs are best planted _____. **A) in areas with afternoon shade**
 B) in areas with constant sunlight C) in the heavy shade of buildings, trees and shrubs
 D) in very moist soils E) none of the above
317. In order to survive in the florist business, an owner/manager must be able to figure out the true value of the product and strive for improvement of the perceived value. This is the essence of _____.
 A) discount pricing B) retail pricing C) premium pricing **D) profit pricing**
 E) none of the above
318. Choosing the right heating system for a particular greenhouse depends on all but one of the following variables. Identify the one that is NOT applicable. A) climate **B) type of container**
 C) size of greenhouse D) cost and availability of heating fuel E) none of the above
319. A physiological disorder of geraniums caused by high moisture levels in the root media is _____.
 A) bacterial blight B) botrytis blight **C) oedema** D) pythium E) none of the above
320. The unit of heat measurement used in the greenhouse industry is the _____.
A) Btu B) CCM C) Ekg D) Ocm E) none of the above
321. The principle of total compatibility of all parts of an arrangement with each other is termed _____.
 A) rhythm B) texture **C) harmony** D) proportion E) none of the above
322. There are 3 primary ways heat is lost in a greenhouse. Which of the following is not one of these ways?

- A) air leakage **B) solarization** C) conduction D) radiation
E) none of the above
323. Upper leaves which show interveinal chlorosis probably suffer from _____.
A) lack of water B) a sulfur deficiency **C) an iron deficiency**
D) a nitrogen deficiency E) none of the above
324. There are 3 basic types of pots that are commonly used in the greenhouse industry. Which of the following is NOT one of these 3 basic types of pots?
A) designer pot B) standard pot
C) azalea pot D) bulb pot or pan E) none of the above
325. This is an abbreviation for the mathematical difference between the day and night temperature in a greenhouse. Identify this abbreviation.
A) DTNT B) DT/NT
C) AM-PM **D) DIF** E) none of the above
326. A process used by growers to produce well branched, compact plants with many flowers is called _____.
A) stunting B) compacting **C) pinching** D) potting E) none of the above
327. The most commonly used growth retardant is _____.
A) cycocel B) diazanon
C) retoid D) slow grow E) none of the above
328. Flowers which are worn by men and pinned on a lapel are called _____.
A) falcon corsage
B) hand-tied bouquet **C) boutonnières** D) pot pourri corsage E) none of the above
329. Cut carnations are classified into 2 groups. Which of the following is the groups of carnations?
A) floral and greenhouse **B) standards and miniatures** C) premium and discount
D) pompom and standard E) none of the above
330. Rooted cuttings of carnations are planted very shallow and are irrigated by ooze tubes or a similar system. The primary reason for this type of watering is to _____.
A) control costs
B) not wet foliage C) allow the injection of iron D) save time and equipment
E) none of the above
331. One popular color combination is the Santa Fe colors of the Southwestern desert. These colors include:
A) copper, silver, gold **B) aqua, peach, adobe** C) black and white with any hue
D) earth tones, taupe, red E) none of the above
332. In order to create successful arrangements, one must understand the range of acceptable color combinations called color schemes. One of the following is NOT among the frequently used color schemes:
A) monochromatic B) analogous C) triad
D) quadruplex E) none of the above
333. Color is important in helping attain most of the principles of design. One of the following is NOT among the guidelines commonly followed in floral arranging:
A) repeat colors in a design
B) use darker colored flowers deeper and lower in the arrangement
C) never allow one color to dominate D) don't use too many different colors
E) none of the above
334. A component of greenhouse rooting media consisting of siliceous volcanic rock, crushed and heated to 1800 degrees F is _____.
A) vermiculite B) rockwool C) calcined clay
D) perlite E) none of the above

335. This growth regulator increases the flower size of geraniums and accelerates flowering in cyclamen. It is _____.
 A) auxin **B) gibberellic acid** C) B-nine
 D) ethephon E) none of the above
336. The principles of design are fundamental truths that have evolved as the various art forms have developed. Which of the following is NOT among the major principles of design? A) balance
 B) scale C) emphasis **D) price** E) all are major principles
337. In traditional arrangements, materials with higher visual weight are used lower in the arrangement to create stable effect; they are sunken a little further into the arrangement for depth. Identify the significant principles of design that are related to balance: A) color & tone **B) stability & depth**
 C) size & shape D) lighting & distance E) none of the above
338. The characteristics of a formal arrangement include all but one of the following. Identify the characteristic which is NOT normally associated with a formal arrangement.
 A) arrangement is usually symmetrically balanced
 B) flowers used include roses, orchids and carnations **C) arrangement may be placed off-center**
 D) textures are smooth, shiny or velvety E) none of the above
339. As the art of floral design has become more formalized through practice, teaching and writing; there has developed a group of traditional guidelines that are frequently cited by people involved in flower arranging. Which of the following, if any, are part of these traditional guidelines?
 A) avoid crossing lines and lines that change abruptly
 B) keep flowers from lining up in distracting patterns
 C) neither of the above **D) both of the above**
340. The most common single aspect of perennial gardening is _____.
 A) control of plant height B) deciding between a formal or informal design
 C) determining the garden's location **D) timing the bloom** E) none of the above
341. A more expensive decorative container into which a potted plant can be set is a _____.
A) jardinière B) quick sleeve C) vase D) rose bowl E) none of the above
342. Analogous color harmony utilizes _____. A) a combination of primary and secondary color
 B) two colors directly opposite each other on the color wheel C) tints, shades and tones of one hue
D) two or three adjacent colors on the color wheel E) none of the above
343. All but one of the following is easily suitable for pressing. Which item is NOT suitable for pressing.
A) daffodil B) dusty miller C) pansies D) African violets E) none of the above
344. The genus and species name for the carnation is _____. **A) Dianthus caryophyllus**
 B) lathyrus odoratus C) Anemone coronaria D) Lobularia maritime
 E) none of the above
345. When doing the flowers for a wedding you may work with all but one of the following arrangements. Which of these arrangements would not be suitable for a wedding?
 A) cascade bouquet arrangement B) keeling bech arrangement
 C) two-tiered guest table arrangements D) full couch spray arrangement E) none of the above

346. When planning for a wedding, there are basic considerations that the florist must address in order to properly assist the bride for this important occasion. Which, if any of the items below are NOT one of these factors?
 A) location of wedding B) formality of wedding C) time of year
D) method of payment E) none of the above
347. Optimum temperature for poinsettia growth is _____ degrees F. **A) 60 to 80**
 B) 45 to 55 C) 70 to 90 D) 80 to 85 E) none of the above
348. There are certain soil requirements for building a terrarium. Too much soil looks heavy, while too little soil will not hold the root system. In general, what is the correct amount of soil in relation to the height of the container?
A) 25% B) 50% C) 75% D) 66% E) none of the above
349. Certain plants are quite suitable for use in terrariums, Which plants, if any, of the following are suitable for terrariums?
 A) creeping fig B) needle point ivy **C) both of the above**
 D) neither of the above
350. Cycocel or chlormequat is a commonly used _____. A) height enhancer
B) height retardant C) pinching agent D) growth promoter
 E) none of the above
351. There are three basic “C” aims for selling in a flower shop. Which of the following is NOT included in the three “C”’s?
 A) create an interest **B) contain the cost**
 C) convince the customer D) close the sale E) none of the above
352. When utilizing the ratio markup method a 5 to 1 item with the total wholesale value of the material costing \$12.00 would retail for _____. A) \$30.00 B) \$ 120.00 **C) \$60.00**
 D) \$45.00 E) none of the above
353. The sales showroom is separate from the work area. It should be neat and appealing with adequate floor space for customers to move about. Which of the following features is NOT typical of a sales area?
 A) wrapping / sales counter with cash register **B) design table for making arrangements**
 C) display refrigerator holding completed arrangements and cut flowers for sale
 D) consultation area with table and chairs E) all of the above are parts of a sales area
354. Which of these summer blooming perennials produce dense, bristly balls of dense color?
 A) delphinium B) blue plumbago C) bleeding hearts **D) globe thistle**
 E) none of the above
355. When growing orchids a hygrometer is used to measure _____. A) temperature
 B) light C) air flow **D) humidity** E) none of the above
356. A hue plus gray which is duller than the pure hue, and produces a soft, soothing effect is a _____.
 A) split complementary **B) tone** C) shade D) tint E) none of the above
357. Orchids are accustomed to some temperature fluctuation between day and night. In fact without a day – night fluctuation of 10 to 15 degrees F, the orchids may _____. A) refuse to grow healthy foliage
B) refuse to flower C) both of the above D) neither of the above
358. The night temperature is the most important temperature factor to consider when selecting orchids. The typical acceptable night temperature range for the majority of orchids falls within _____ degrees F.
A) 50 to 70 B) 60 to 85 C) 45 to 60 D) 30 to 40 E) none of the above

359. The most popular orchid potting material is _____. A) osmunda fiber **B) fir bark**
 C) tree fern fiber D) lava rock E) none of the above
360. Your orchids are facing a pest problem. The buds, flowers and tender new growth are pitted or stunted. Tiny insects are often visible. A sticky fluid secreted by the insects provides a medium for growth of sooty mold and attracts ants. The most likely problem is _____. A) spider mites
B) aphids C) mealybugs D) snails and slugs E) none of the above
361. Excessively short stems in tulips planted outdoors are due to _____. A) lack of sunlight
B) warm spring temperatures and lack of winter cooling C) excessive moisture
 D) magnesium and calcium deficiencies E) none of the above
362. A group of orchids have a problem caused by improper culture. The foliage is dark green and healthy, but the plant won't flower. The probable cause is _____. A) over fertilization B) underwatering
 C) insufficient humidity **D) too little light** E) none of the above
363. There are numerous advantages to having a container garden. Which of the following, if any, are advantages of a container garden? A) containers are mobile
 B) plants can be spotlighted because of their location
 C) you can enjoy plants where an in ground garden is impossible
D) all of the above E) none of the above
364. A perennial vine producing fragrant yellow flowers all summer is _____.
 A) coral vine **B) Carolina Jessamine** C) morning glory D) wisteria
 E) none of the above
365. Annuals for shady locations might include which of the following? A) sunflower and rose moss
 B) zinnia and marigold C) petunia and verbena **D) coleus and impatiens**
 E) none of the above
366. Plants native to regions where summer is warm-to-hot and winter is mild or frost free are called _____.
 A) hardy annuals **B) tender annuals** C) half-hardy annuals D) biennials
 E) none of the above
367. Silver thiosulfate (STS) _____. **A) is an ethylene antagonist**
 B) causes petal abscissions C) promotes bacterial activity D) a and b
 E) none of the above
368. This growth regulator increases the flower size of geraniums and accelerates flowering in cyclamen.
 A) auxin **B) gibberellic acid** C) B-nine D) ethephon
 E) none of the above
369. A group of closely spaced flowers, net and accessories in a hand held floral arrangement is called a _____.
 A) pompon B) corsage C) Hogarthian curve **D) nosegay**
 E) none of the above
370. Fungus gnat damage to potted plants is caused by the _____. A) adult stage **B) larval stage**
 C) pupal stage D) all of the above E) none of the above
371. A type of propagation in which the propagule remains attached to the parent plant is termed _____.

- A) **layering** B) stem cutting C) root cutting D) division
E) none of the above
372. An instrument which measures the electrical conductivity of a soil solution is called a/an _____.
A) manometer B) tensiometer C) photometer **D) solubridge**
E) none of the above
373. Short, crooked rose peduncles often result from _____. **A) excessive vigor**
B) Botrytis blight C) calcium deficiency D) excessive soluble salts
E) none of the above
374. The greatest control over the cooling phase of Easter lily production is provided by _____.
A) controlled temperature forcing B) commercial care cooling C) natural cooling
D) fan and pad cooling E) none of the above
375. All of the following are bulbous and bulbous rooted plants except _____. A) dahlias
B) Dutch iris C) caladiums **D) snapdragons** E) none of the above
376. A good substitute for sand, this material provides aeration in rooting media. This is _____.
A) peat moss **B) perlite** C) vermiculite D) rock wool E) none of the above
377. Floral arrangements designed with visual paths along which the eye is led from one point of interest to another are called _____. A) mass arrangements B) abstract arrangements
C) naturalistic arrangements **D) line arrangements** E) none of the above
378. Cultivars differ in the time required to reach a salable stage following the start of inductive short days. This time is called the _____. A) DIF **B) response** C) finishing time
D) acclimatization period E) none of the above
379. Gladiolus corms are typically propagated from _____. A) rhizomes B) bulbs
C) cormels D) cuttings E) none of the above
380. This fungus attacks a wide variety of ornamental plants, probably causing more losses than any other single pathogen. A) Pythium root rot **B) Botrytis cinerea**
C) Alternaria D) Phytophthora E) none of the above
381. Common to geraniums, this leaf disorder is brought on by an imbalance in water relations during production. This disorder is _____. A) necrosis B) chlorosis
C) edema D) blasting E) none of the above
382. A device used to measure air pressure between two plastic layers in a greenhouse is called a _____.
A) hygrometer B) tensiometer **C) manometer** D) barometer E) none of the above
383. Orchids are distinguished from all other flowers by their _____. A) rostellum B) sepals
C) zygomorphic flowers **D) a and c** E) none of the above
384. The acceleration of flowering by manipulation of environmental conditions is known as _____.
A) pulsing **B) forcing** C) leaching D) after ripening E) none of the above
385. Ridge and furrow greenhouses at all latitudes should be oriented _____.
A) north to south B) east to west C) to the builders convenience

- D) northwest to southeast E) none of the above
386. The number one foliage production state in acres and wholesale value is _____. A) Texas
 B) Hawaii C) California **D) Florida** E) Pennsylvania
387. These annuals will tolerate periods of damp or cold weather, but may be killed by frost.
 A) hardy **B) half hardy** C) biennials D) tender E) none of the above
388. An arrangement should be _____ times the height of a tall container or the length of an elongated container.
 A) 5 to 6 B) ½ C) 3 to 4 **D) 1.5 to 2**
 E) none of the above
389. A mum cultivar with a single flower more than 4 inches in diameter, having all lateral buds removed is called a _____. A) spray mum B) disbud mum **C) standard mum**
 D) miniature mum E) none of the above
390. The light intensity at which respiration and photosynthesis are balanced is _____.
 A) photosynthetically active radiation B) approximately 1000 foot candles
 C) light compensation point **D) all of the above** E) none of the above
391. The florists chrysanthemum is a _____. A) composite inflorescence B) complex hybrid
 C) short day plant **D) all of the above** E) none of the above
392. The growth regulator used most often to control marketable plant heights of potted tulips, potted dahlias and potted lilies is _____. A) **A-rest** B) benlate C) florel
 D) bonsai E) none of the above
393. Field production of gladiolus is accomplished by using _____. A) **corns** B) cuttings
 C) crowns D) bulbs E) layering
394. Hiemalis Begonia is very responsive to _____. A) high nutrient levels
 B) carbon dioxide levels C) temperature **D) b and c** E) none of the above
395. A good example of a CAM plant is the _____. A) poinsettia **B) kalanchoe**
 C) rose D) chrysanthemum E) none of the above
396. Plant texture is determined by _____. A) the way the leaf feels to the touch
 B) foliage density C) plant shape **D) b and c** E) none of the above
397. A naturally occurring auxin produced in apical meristems is _____. A) IBA B) NAA
 C) IPA **D) IAA** E) none of the above
398. A brown foam easily penetrated by delicate floral stems, which aids in the arrangement of silk and dry flowers is _____. A) silica gel B) holdfast **C) Sahara**
 D) Styrofoam E) none of the above
399. Costs associated with making an arrangement, decorating a blooming plant, or creating wedding flowers are called _____. A) **direct costs** B) indirect costs C) fixed costs
 D) overhead E) none of the above
400. The hook method of wiring for floral arrangements is used for _____. A) **flat headed flowers**

B) tubular flowers

C) delicate flowers

D) roses

E) none of the above

401.