

**INSTITUTE OF HORTICULTURAL SCIENCES
MULTIPLE CHOICE QUESTIONS FOR ENTRY TEST**

1. **The edible part of potato is:**
 - a. Root
 - b. Tuber**
 - c. Rhizome
 - d. Corm
2. **Vegetable production for local consumption is:**
 - a. Market gardening**
 - b. Home gardening
 - c. Truck gardening
 - d. Vegetable forcing
3. **Foliage plants with extremely tender and watery stem are :**
 - a. Herb
 - b. Succulents**
 - c. Vine
 - d. Runner
4. **Most of the summer vegetables are:**
 - a. Annual**
 - b. Biennial
 - c. Perennial
 - d. None
5. **Summer vegetables can be grown out of season in a climatic region:**
 - e. Lower Sindh**
 - a. Upper Sindh
 - b. Southern Punjab
 - c. Northern Punjab
6. **In seed formation the inner integument remains thin and develops into:**
 - a. Testa
 - f. Tegmen**
 - b. Aril
 - c. Hilum
7. **During seed formation, a sear left by the funiculus is termed as**
 - a. Hilum
 - b. Funiculus
 - c. Operculum**
 - d. Raphe
8. **Cracking in tomato fruit is due to:**
 - a. High nitrogen level
 - b. Temperature fluctuations
 - c. Soil moisture fluctuations
 - d. All of these**
9. **Endosperm like tissue (2n) in seed developing from nucellus is :**
 - e. Endospem
 - f. Cotyledom
 - g. Perisperm**
 - h. Mericarp
10. **Orthodox seeds after dissemination may be**
 - a. None dormant
 - b. Dormant
 - c. Quiescent
 - i. All of above**
11. **Reduction or elimination of dormancy in crop plant is due to :**
 - a. Domestication
 - b. Hybridization
 - c. Mutation
 - j. Acclimatization**
12. **Dormancy due to factors within the embryo is:**
 - a. Endogenous**

- b. Exogenous
- c. Combination
- d. None of above

13. **Secondary dormancy in non dormant seeds is due to:**

- a. **Temperature**
- b. Moisture
- c. Aeration
- d. Light

14. **Germination of undeveloped seeds is favored by:**

- a. Warm temperature ($>20^{\circ}\text{C}$)
- b. Gibberallic acid
- c. Low temperature ($<20^{\circ}\text{C}$)
- d. **a & b**

15. **During stratification, the most important factor is:**

- a. Temperature
- b. Duration
- c. Media
- e. **All of above**

16. **Stage at which seed achieves it maximum dry weight and has maximum germination potential and vigor is:**

- a. **Physiological maturity**
- b. Edible maturity
- c. Harvest maturity
- d. None of above

17. **Seed vigor is affected by**

- a. Time of storage
- b. Type of seed stored
- c. Storage environment
- d. **All of above**

18. **Tetrazolium test to check seed viability is**

- a. Chemical test
- b. Enzyme test
- c. Germination test
- d. **a & c**

19. **Researchers describe seed moisture contents in terms of :**

- a. Dry weight
- b. Wet weight
- c. Percent weight
- d. **a & b**

20. **Controlled inhibition of seed is termed as:**

- a. Priming
- b. Soaking
- c. Chilling
- d. **None of above**

21. **Celery and lettuce at high temperature become**

- a. Photodormant
- b. **Thermodormant**
- c. Ecodormant
- d. Non dormant

22. **Excessive soil moisture, late in the season cause.**

- a. Decrease in TSS decrease in dry matter
- b. Increase in TSS decrease in dry matter
- c. **Decrease in TSS increase in dry matter**
- d. None of above

23. **Most of following category crops are shallow rooted**
a. Summer
b. Winter
c. Off season
d. All of above
24. **Deep rooted vegetables require:**
a. Less frequent irrigation
b. More water at each irrigation
c. Both a & b
d. None of above
25. **Fruit of following vegetables is edible:**
a. Summer
b. Winter
c. Cruciferous
d. All of above
26. **Mulches are mainly used to reduce**
a. Transpiration
b. Evaporation
c. Evapotranspiration
d. All of above
27. **What type of mulches reduce soil temperature?**
a. Organic mulch
b. Gray polythene
c. Black polythene
d. Transparent polythene
28. **For hybrid seed production _____ flowers are completely suppressed on female plants.**
a. Staminate
b. Pistillate
c. Staminode
d. Alternate
29. **Recommended cucumber cultivars under tunnel production technology are:**
a. Monoecious
b. Gynoecious
c. Andromonoecious
d. Gynomonoecious
30. **Flowering in water melon is unaffected by light duration as it is:**
a. Short day long night plant
b. Long day short night plant
c. Day neutral plant
d. None of the above
31. **Nature of pollination in cucurbits is:**
a. Highly cross pollinated
b. Oftenly cross pollinated
c. Highly self pollinated
d. None of above
32. **Ginger is commonly cultivated as:**
a. Annual
b. Biennial
c. Perennial
d. Biannaul
33. **Cross pollination is essential in following type of vegetables.**
a. Monoecious
b. Dioecious
c. Gynoecious
d. Perigynous

34. **Cross pollination in plants bearing bisexual flowers is due to**
a. Dichogamy
b. Herkogamy
c. Heterostyly
d. All of above
35. **In anemophilous plants, pollens are disseminated by means of:**
a. Insects
b. Water
c. Wind
d. Gravity
36. **In pollen development Gametocides induces a problem of:**
a. Sterility
b. Viability
c. Fertility
d. Mobility
37. **Production of seeds without fertilization is termed as:**
a. Parthenocarpy
b. Parthenogenesis
c. Gametogenesis
d. All of above
38. **Most of the hybrid watermelon and cucumber are:**
a. Triploid
b. Diploids
c. Aneuploids
d. Colchipooids
39. **Removal of off type plants from a seed field is termed as:**
a. Weeding
b. Rouging
c. Hoeing
d. All of above
40. **The most important seed component affecting seed /viability during storage is:**
a. Temperature
b. Humidity
c. Moisture
d. Food reserves
41. **Potato is generally propagated through**
a. Seed potato
b. Potato seed
c. True Potato Seed
d. All of above
42. **Isolation during seed production is done by:**
a. Types (Varieties)
b. Plantation at a distance
c. Zoning
d. All of above
43. **The most common pollinator insect in Pakistan is**
a. Syrphid fly
b. Bumble bees
c. Honey bees
d. House fly
44. **Seed production in biennial vegetables is mostly done by:**
a. Seed to seed method
b. In situ method
c. Replanting method
d. All of above

45. **Male sterility is not due to**
a. Genetic factor
b. Genome factor
c. Cytogenetic factor
d. Nutritional factor
46. **Hybrid vigor in vegetables is manifested by**
a. High yield
b. Uniformity in size
c. Uniformity in maturity
d. All of above
47. **Water melon for seed should be harvested when**
a. Tendrils wither
b. Skin color is green
c. Skin color is pale yellow
d. Vine dry out
48. **In Pakistan, vegetables for seed production are harvested by:**
a. Manual method
b. Machines
c. Combine harvesters
d. All of above
49. **During storage of vegetable seeds, seed moisture should be**
a. Less than 10%
b. Equal to 10%
c. Greater than 10%
d. None of above
50. **The poorest seed storage capacity is in:**
a. Okra
b. Peas
c. Cucurbits
d. Onion
51. **Nitrates are absorbed at pH below _____:**
a. 5
b. 6
c. 7
d. 8
52. **Hormones which control apical dominance are:**
a. Auxins
b. Cytokinins
c. Gibberellins
d. Polyamines
53. **Tetraploid watermelon must be pollinated by ____ plants to produce a seedless watermelon**
a. Triploid
b. Aneuploid
c. Diploid
d. Tetraploid
54. **Which vegetable cannot be grown as an off season vegetable:**
a. Tomato
b. Potato
c. Chillies
d. Cucumber
55. **Lower temperature than normal convert male flowers into perfect flowers in _____:**
a. Date palm
b. Mango
c. Papaya
d. Citrus

56. Tomato is a _____ crop.
- a. Self pollinated**
 - Insect pollinated
 - Oftenly cross pollinated
 - Wind pollinated
57. Turmeric is propagated by:
- Corms
 - Seed
 - c. Rhizome**
 - Bulb
58. Sweet potato is propagated by:
- Stem cuttings
 - Tubers
 - Roots
 - d. a & b**
59. Self pollination is a form of:
- a. Inbreeding**
 - Out breeding
 - Random mating
 - None of these
60. Cross pollination is associated with:
- Cleistogamy
 - e. Chasmogamy**
 - Dichogamy
 - Apogamy
61. Completion of pollination and fertilization in unopened flower bud is termed as
- Chasmogamy
 - Apogamy
 - f. Cleistogamy**
 - Dichogamy
62. Maturation of anthers and stigma at the same time refers to:
- g. Homogamy**
 - Chasmogamy
 - Cleistogamy
 - Dichogamy
63. Fertilization after opening of flower refers to:
- Cleistogamy
 - h. Chasmogamy**
 - Homogamy
 - Herkogamy
64. Male sterility promotes:
- Autogamy
 - Allogamy
 - Homogamy
 - i. Chasmogamy**
65. Exposure of seed to low temperature before germination is termed as :
- Scarification
 - j. Stratification**
 - Vernalization
 - All of above
66. Imbibed or germinated seeds subjected to cold temperature is termed as:
- Scarification
 - Stratification
 - k. Vernalization**
 - Sterilization

67. Which of following vegetable does not require specific low temperature before flowering:
- a. Beetroot
 - b. Cabbage
 - c. Onion
 - l. **Brinjal**
68. Edible part of cauliflower is :
- a. Flowers
 - b. Flower bud
 - m. **Vegetative bud**
 - c. Inflorescence
69. Edible portion of cabbage is
- a. Terminal bud
 - n. **Leaves**
 - b. Leaves + inflorescence
 - c. All of above
70. Cole crops are:
- o. **Hardy**
 - a. Half hardy
 - b. Non hardy
 - c. Semi hardy
71. Which of the following crop has lowest water contents:
- b. Cucumber
 - c. Watermelon
 - d. Bottle gourd
 - p. **Cauliflower**
72. The commercial variety of watermelon is:
- q. **Sugar baby**
 - a. Red beauty
 - b. Red king
 - c. Sugary
73. Vine of crop of bottle gourd is not staked during:
- r. **Summer season**
 - a. Rainy season
 - b. Early season
 - c. Late season
74. Which one is not the best source of protein?
- s. **Potatoes**
 - a. Peas
 - b. Beans
 - c. Okra
75. The cause of hotness in Chillies is:
- a. Cucurbitacin
 - t. **Capsaicin**
 - b. Allicin
 - c. All of above
76. Which crop is most susceptible to viral infection :
- a. Chilies
 - u. **Tomato**
 - b. Onion
 - c. Brinjal
77. Which of the following vegetable has a dioecious behaviour:
- a. Onion
 - b. Cabbage
 - c. Bitter gourd
 - v. **Spinach**

78. Consecutive use of garlic will reduce the level of:
w. **Cholesterol**
a. Sugar
b. Uric acid
c. None of above
79. Bulb production in onion is dependent upon:
a. Temperature
b. Soil moisture
x. **Day length**
c. All of above
80. Red colour of carrot is due to :
a. Lycopene
y. **Carotene**
b. Anthocyanin
c. Propanene
81. Colour of carrot roots is affected by:
a. Soil temperature
z. **Soil moisture**
b. Soil texture
c. All of above
82. Radish belongs to family:
aa. **Cruciferae**
a. Umbelliferae
b. Leguminosae
c. Poaceae
83. For an early harvest, cucurbits are grown on:
a. Rocky soils
b. **Sandy soils**
c. Clayey soils
d. Organic soils
84. Tomato fruit is botanically a:
a. **Berry**
b. Pome
c. Drupe
d. Hip
85. The portion of axis below the cotyledons in seed is:
a. Micropyl
b. **Hypocotyl**
c. Epicotyl
d. None of above
86. Which type of flowers can not produce seeds and / or fruit?
a. Pistillate
b. Perfect
c. Hermaphrodite
d. **Staminate**
87. Degeneration of above ground parts in ginger is due to
a. **Senescence**
b. Maturity
c. Partial senescence
d. Over ripening
88. In spinach, pollination takes place by means of:
a. Water
b. Insects
c. Birds
d. **Wind**

89. Tender crop cannot tolerate a minimum temperature of
- 2°C
 - 1°C
 - 0°C
 - All of above**
90. Optimum temperature for cool season vegetables is:
- 25-30°C
 - 25-27°C
 - 18-24°C**
 - 15-20°C
91. Which one is not an appropriate approach to control frost?
- Avoidance**
 - Reduction of heat loss
 - Addition of heat
 - Transmittance of control
92. Tomato, chillies and brinjal are grouped as
- Cole crops
 - Fruit crops
 - Solanaceous crops**
 - Summer crops
93. Color development in tomato fruit is due to
- Lycopene**
 - Carotenoid
 - Polypropylene
 - All of above
94. Cucurbits consumed at immature stage are grouped under:
- Summer squashes
 - Winter squashes
 - Gourds**
 - Pumpkins
95. Almost all vegetables are dioecious with respect to flower.
- Summer
 - Winter
 - Both of these
 - None of these**
96. Term vine yard is used for:
- Grape plantation**
 - Citrus plantation
 - Mango plantation
 - None of these
97. Term viticulture is used for:
- Grape cultivation**
 - Citrus cultivation
 - Mango cultivation
 - None of these
98. Home gardening deals with vegetable production for:
- Home consumption**
 - For local market
 - At commercial level
 - All of these
99. Truck gardening means vegetable production for:
- Distant places**
 - Industry
 - Local market
 - None of these

100. Tip burn of lettuce occurs at high air temperature when the soil is _____:
- Cool**
 - Dry
 - Hot
 - Wet
101. Organic crop cultivation is :
- With fertilizers
 - Without fertilizers**
 - With organic manures
 - None of these
102. Thinning in vegetables is practiced to maintain:
- Plant x Plant distance**
 - Line x Line distance
 - Both of these
 - None of these
103. Transplanting means
- Shifting of seedlings**
 - Shifting of large plants
 - Shifting of potted plants
 - All of these
104. Shrubs fall in the category of
- 7-15 feet high**
 - 25 feet high
 - More than 25 feet
 - None of these
105. Deciduous plants are mostly grown in
- Hilly area**
 - In plains
 - Along rivers
 - None of these
106. Vine mean climbing/trailing plants with
- Herbaceous stem**
 - Woody stem
 - Both of these
 - None of these
107. Monoecious plants have male and female sexes/flowers on
- Same plant**
 - Different plants
 - Both of these
 - None of these
108. Hardy crops /plants are acclimatized against
- Frost
 - Extreme heat
 - Both of these**
 - None of these
109. True fruits developed from
- Ovary**
 - Thalamus
 - Pericarp
 - All of these
110. Drupe fruits have all the three ovarian layers
- Fused
 - Separated**
 - Mixed
 - None of these

111. **Creeping vegetables crops are grown on**
a. Beds
b. Ridges
c. Flats
d. All of these
112. **Mango is a**
e. Drupe fruit
a. Pome fruit
b. Berry fruit
c. Aggregate fruit
113. **Citrus is a special type of**
f. Berry
a. Pome
b. Drupe
c. None of these
114. **Dicots could be identified on the basis of:**
g. Reticulate leaf venations
a. Parallel venations
b. No leaf venations
c. None of these
115. **In binomial nomenclature system, 1st name is:**
h. Genus name
a. Spp. name
b. Family name
c. Sub. Family name
116. **Most of the summer vegetables belong to family:**
a. Solanaecae
i. Cucurbitaceae
b. Malvaceae
c. Poaceae
117. **Cultivar means**
j. Some cultivated variety
a. Discarded variety
b. Rejected variety
c. Approved variety
118. **Pears and beans are rich source of:**
a. Carbohydrates
k. Protein
b. Both
c. None of these
119. **Potato and sweet potato are well known for**
l. Carbohydrates
a. Proteins
b. Vitamins
c. All of these
120. **Leafy vegetables provide**
m. Iron
a. Carbohydrates
b. Protein
c. None of these
121. **Iron is a carrier of**
n. Oxygen
a. CO₂
b. Both of these
c. None of these

122. Vitamin A is effective against
- o. **Night blindness**
 - a. Beri beri disease
 - b. Gum problems
 - c. None of these
123. Carrot is a rich source of vitamin:
- p. **Vitamin A**
 - a. Vitamin C
 - b. Vitamin D
 - c. Vitamin E
124. Cole crops are comprised of:
- a. Cauliflower
 - b. Cabbage
 - c. Knol Khol
 - q. **All of these**
125. Salad crops are
- a. Lettuce
 - b. Radish
 - c. Cabbage
 - r. **All of these**
126. Which of the following crop is grown sexually
- a. Potato
 - b. Garlic
 - s. **Onion**
 - c. Turmeric
127. Tomato varieties are mainly:
- a. Indeterminate type
 - b. Determinate type
 - t. **Both types**
 - c. None of these
128. Fertigation refers to the application of fertilizer with
- u. **Water**
 - a. Rain
 - b. Both of these
 - c. None of these
129. In hydroponic system plants are grown in
- v. **Water**
 - a. Soil
 - b. Sand
 - c. Gravels
130. Through drip we can provide
- a. Water
 - b. Fertilizer
 - w. **Both of the above**
 - c. None of these
131. Nitrogen in vegetables is needed for
- x. **Vegetative growth**
 - a. Ripening /maturity
 - b. Reproductive growth
 - c. None of these
132. Seed potato seed has
- y. **Dormancy**
 - a. Rest period
 - b. Both of these
 - c. None of these

133. Carrot and coriander belong to the family
z. **Umbelliferae**
a. Cruciferae
b. Cucurbitaceae
c. None of these
134. Potato belong to the family
aa. **Solanaceae**
a. Umbelliferae
b. Cruciferae
c. None of these
135. Melons belong to the family
a. **Cucurbitaceae**
b. Solanaceae
c. Cruciferae
d. None of these
136. Melons have seeds in
e. **Cavity/centre**
a. Scattered
b. Both type may be
c. None of these
137. Cantaloupe belongs to the group:
a. Cucurbits
f. **Melons**
b. Gourds
c. Squashes
138. Hybrid varieties of cucumber grown in tunnels are:
g. **Parthenocarpic**
a. Zygotic
b. Both types
c. None of these
139. Staking of vines in rainy season is done to avoid:
a. Insect attack
h. **Disease attack**
b. Sunscald
c. None of these
140. Optimum temperature for potato tuber formation is
i. **20-22°C**
a. 25-30°C
b. 22-25°C
c. All of these
141. Tuber initiation in potato starts after
j. **7th week**
a. 9th week
b. 5th week
c. 4th week
142. Color of carrot depends upon
a. Age
b. Variety
c. Season
k. **All of these**
143. Splitting of carrot is due to
l. **Fresh manure**
a. Heavy fertilizer
b. Less fertilizer
c. None of these

144. **High temperature in chillies causes**
a. Flower drop
b. Fruit drop
m. Both of the above
c. None of these
145. **Early blight and late blight of potato are**
n. Fungal disease
a. Viral disease
b. Bacterial disease
c. Disorders
146. **Potato dormancy can be broken through**
a. Chemical treatment
b. Low temperature
o. Both of these
c. None of these
147. **Dormancy period in potato is about**
a. 2 Months
b. 1 Month
p. 3 Months
c. ½ Month
148. **Seed rate/acre in potato for autumn crop is**
q. 900-1100 Kg
a. 500 Kg
b. 400 Kg
c. 100 Kg
149. **Potato cut tuber are used for planting during**
a. Autumn crop
r. Spring crop
b. Both of above
c. None of above
150. **Hollow heart of potato is a**
a. Disease
s. Disorder
b. Insect attack
c. Deficiency
151. **Potato tubers become green if**
t. Exposed to light
a. Attacked by insect
b. Infected
c. None of these
152. **Virus free seeds of potato are produced in**
u. Hilly areas
a. Spring crop
b. In plains
c. Autumn crop
153. **Okra belongs to family**
v. Malvaceae
a. Solanaceae
b. Cucurbitaceae
c. Chenopodiaceae
154. **Desiree and Cardinal are varieties of**
a. Carrot
w. Potato
b. Radish
c. Peas

155. Which of the following vegetable is directly seeded in field:
- a. Chillies
 - b. Tomato
 - c. Brinjal
 - x. **Peas**
156. Buttoning is a disorder of
- y. **Cauliflower**
 - a. Peas
 - b. Potato
 - c. Tomato
157. Production of very small sized heads in cauliflower is called
- z. **Buttoning**
 - a. Belting
 - b. Both of these
 - c. None of these
158. Development of seed stalks earlier in biennial crops is called
- a. **Bolting**
 - b. Buttoning
 - c. Greening
 - d. None of these
159. Bolting in biennial crops is due to
- e. **Low temperature exposure**
 - a. High temperature exposure
 - b. Both of these
 - c. None of these
160. Quality seed carrot is produced through
- a. Seed to seed method
 - b. Topping in situ method
 - f. **Steeklings**
 - c. None of these
161. Blossom end rot of tomato is due to
- a. Infection/disease
 - g. **Boron/ Ca. deficiency**
 - b. Insect attack
 - c. Nutritional deficiency
162. Vegetables belonging to the cross pollinated group is
- a. Peas
 - b. Tomato
 - c. a & b
 - h. **Cabbage**
163. White brinjals are commonly grown for:
- i. **Ornamental purpose**
 - a. Salad purpose
 - b. a + b
 - c. None of these
164. Tunnels for vegetable forcing are categorized as
- a. High type
 - b. Low type
 - c. Walk in type
 - j. **All of these**
165. Storage life of vegetables increased by the use of GA spray at harvesting time
- k. **50 ppm**
 - a. 100 ppm
 - b. 200 ppm
 - c. None of above

166. Dormancy of seeds are broken by
l. **GA**
a. Ethylene
b. Water
c. None of above
167. Femaleness in cucumber is induced by :
a. GA
b. ABA
c. IBA
m. **None of above**
168. Maleness in cucumber is induced by :
n. **GA**
a. ABA
b. IBA
c. None of above
169. Plants, protein, RNA, DNA contents are increased by
a. Auxins
b. Adenine
o. **Cytokinins**
c. None of above
170. Most of the cucurbits are:
p. **Salt tolerant**
a. Salt sensitive
b. a & b
c. None
171. Most commonly used growth retardants are
q. **Phosphon**
a. MH
b. Caumarin
c. None of above
172. Alar significantly increased fruit.
a. Size
b. Color
c. Weight
r. **All of above**
173. In green plants light favour the formation of
s. **Auxin**
a. GA
b. ABA
c. IBA
174. Potato belongs to the family
a. Umbliferae
b. Cucribtacea
t. **Solanaceae**
c. Alliaceae
175. Parthenocarpic cucumber develops due to:
a. After pollination
u. **Without pollination**
b. None of above
c. a & b
176. Family solanaceae consist of these crops.
v. **Potato, Tomato, eggplant etc.**
a. Water melon, muskmelon, cucumber
b. Turnip, Raddish, Carrot etc.
c. None of above

177. Which crop is reproduced sexually
- a. Ginger
 - b. Turmeric
 - w. **Onion**
 - c. None of above
178. Which crop propagated by asexual means:
- x. **Sweet potato**
 - a. Chillies
 - b. Cauliflower
 - c. None of above
179. Vegetables which grow during summer
- a. Turnip, Raddish
 - y. **Cucumber, watermelon**
 - b. Cauliflower, Cabbage
 - c. None of above
180. Vegetables which grow during winter
- a. Cole crops
 - b. Cucurbits
 - c. Root crops
 - z. **a & c**
181. These vegetables are mainly raised through nursery :
- aa. **Tomato, Chillies**
 - a. Cucumber, watermelon
 - b. Radish, turnip
 - c. None of above
183. Viscosity of the cytoplasm increases when temperature is _____:
- a. Low
 - b. Medium
 - c. **High**
 - d. Very High
182. Which vegetables is transplanted without earthen ball
- a. Cucumber,
 - b. Watermelon
 - e. **Cauliflower**
 - c. None of above
183. These vegetables are cross pollinated in nature
- f. **Cauliflower, cabbage**
 - a. Spinach, Peas
 - b. Raddish
 - c. None of above
184. Which vegetable is self pollinated
- g. **Peas**
 - a. Cucumber
 - b. Watermelon
 - c. Sponge gourd
185. The Botanical name of sweet pepper is
- a. *Capsicum annum*
 - b. *Capsicum frutescence*
 - h. **Capsicum groosum**
 - c. None of above
186. Botanical seed of potato is
- a. Seed potato
 - i. **Potato seed**
 - b. None of above
 - c. Slips

187. The origin of the peas is
- a. Africa
 - j. **Asia**
 - b. America
 - c. Europe
188. New growth of plants need _____ water for proper development:
- a. Low
 - b. Medium
 - k. **High**
 - c. Very High
189. Which vegetables consist of more concentration of Vit. A
- l. **Carrot**
 - a. Fenogreek
 - b. Potato
 - c. Peas
190. Which vegetable consist of more Vitamin C contents:
- m. **Tomato**
 - a. Turnip
 - b. Radish
 - c. Cauliflower
191. Which vegetable having high concentration of fats.
- a. Sweet potato, potato
 - b. Water melon, musk melon
 - c. Cabbage, Cauliflower
 - n. **None of above**
192. Which of the family is also named as Nightshade family:
- a. Alliace
 - b. Cucurbitaceae
 - o. **Solanaceae**
 - c. None of above
193. Which one of the following is a bulb crop:
- p. **Garlic**
 - a. Potato
 - b. Ginger
 - c. Arum
194. Botanical name of water melon is :
- q. **Citrullus lanatus**
 - a. Citrillus vulgaris
 - b. Citnullus fistulosis
 - c. None of above
195. Auxin antagonists compounds interact with auxins as:
- r. **Counteract**
 - a. Increase
 - b. Decrease
 - c. None of the above
196. The compounds which inhibit the activity of auxins are known as:
- a. Auxin antagonists
 - s. **Antiauxins**
 - b. Epinostic agent
 - c. All of above
197. Compounds possessing hormone like properties which have small molecular weight, are termed as :
- a. Auxins
 - b. Gibberellins
 - t. **Kinins**
 - c. None of these

198. Many _____ in super optimal concentrations also act as growth inhibitors :
- u. **Auxins**
 - a. Gibberellins
 - b. Cytokinins
 - c. All of above
199. In plants auxin are mainly present in:
- a. Root tips
 - b. Stem end
 - v. **Shoot tips**
 - c. Leaf margins
200. Direction of plant growth is controlled by:
- w. **Auxins**
 - a. Gibberellins
 - b. Kinins
 - c. All of above
201. The amount of growth regulators present in naturally parthenocarpic fruits is:
- x. **High**
 - a. Low
 - b. Intermediate
 - c. None of above
202. Factors involved in the formation of auxins are:
- a. Age of apex
 - b. Light
 - c. Zinc
 - y. **All of the above**
203. Tumorous tissue cells are promising source of:
- a. Abscibic acid
 - z. **Kinin**
 - b. Alar
 - c. Jasminoides
204. Auxins have effective role in :
- a. Delay in flower opening
 - b. Cell division
 - aa. **Reduction of pre harvest fruit drop**
 - c. All of the above
205. _____ have ability to alter the sex of the flowers:
- a. Auxins
 - b. **Gibberellins**
 - c. Kinins
 - d. None of above
206. _____ can release lateral buds from apical dominance :
- a. Auxins
 - b. Gibberellins
 - e. **Kinins**
 - a. None of above
207. Leaf senescence can be retarded by the application of :
- a. Auxins
 - b. Gibberellins
 - c. **Kinins**
 - d. Abscicic acid
208. Growth retardants are the substances which slow down _____ :
- a. Cell division
 - b. Cell elongation
 - c. **a & b**
 - d. None of the above

209. Auxin destruction activity is inhibited by :
- a. Blue light
 - e. **Red light**
 - a. Green light
 - b. None of the above
210. First and the heaviest flower drop in fruit plants occurs due to :
- a. Structural defects in the flowers
 - b. Lack of pollination
 - c. Non fertilization
 - f. **All of the above**
211. Salient factors which contribute to the fruit drop are:
- a. Embryo abortion
 - b. Seed number of fruit
 - c. Moisture supply
 - g. **All of the above**
212. Dormancy can be broken by the use of:
- a. Thiourea
 - b. Ethlene chlorohydrin
 - c. Ethylene acetylene
 - h. **All of the above**
213. Auxins as herbicides are supposed to be:
- a. Non toxic to animals and human beings
 - b. Highly selective
 - c. Exert their action at extremely low concentration
 - i. **All of the above**
214. *Solanum melogena* is locally known as :
- a. Tomato
 - b. Potato
 - j. **Egg plant**
 - c. Chillies
215. Why hardening is practiced in vegetables:
- a. To increase the yield
 - b. To increase fruit colour
 - k. **To increase the resistance of the plant**
 - c. All of the above
216. At fruit bud differentiation, nitrogen contents are _____:
- l. **Low**
 - a. Medium`
 - b. High
 - c. Very high
217. Word pomum means:
- m. **Fruit**
 - a. Vegetable
 - b. Flower
 - c. None of these
218. Chromose number of citrus is:
- a. 8
 - n. **9**
 - b. 10
 - c. 11
219. Parthenocarpy refers to :
- a. Seedless fruits
 - o. **Fruit without pollination**
 - b. Seeds without pollination
 - c. None of above

220. Flower of grapes is technically called as:
- a. Umbel
 - b. Recemose
 - c. Cyptra**
 - d. None
221. Anthesis of grapes complete at:
- a. Pedicel fall
 - b. Calyx drop
 - e. Cap fall**
 - a. None
222. Date palm leaf is called:
- a. Simple leaf
 - b. Long leaf
 - f. Frond**
 - a. Pinna
223. Dioecious, monocot fruit tree is:
- a. Banana
 - b. Pomegranate
 - g. Date palm**
 - a. Papaya
224. Dicot, diecious fruit tree is:
- h. Papaya**
 - a. Date palm
 - b. Mango
 - c. Banana
225. Monocot and monoecious fruit plant is:
- i. Banana**
 - a. Papaya
 - b. Date palm
 - c. None
226. Tree fruit can tolerate a soil pH in the range of:
- a. 4.5-8.5
 - b. 5.5-8.0
 - c. 5.0-8.0
 - j. 5.5-8.5**
227. Water potential in rhizosphere is measured with:
- k. Tensiometer**
 - a. Hygrometer
 - b. pH meter
 - c. Thermo meter
228. Grape plant is technically called as:
- l. Liana**
 - a. Vine
 - b. Creeper
 - c. Bush
229. Guava plant is technically categorized as:
- m. Bush**
 - a. Tree
 - b. Herb
 - c. None
230. Citrus belongs to sub family:
- a. Citrea
 - b. Clausnea
 - n. Aurantioideae**
 - c. Citrae

231. Citrus fruit is botanically:
o. **Hesperidium berry**
a. Pome fruit
b. Climacteric fruit
c. None
232. Apple fruit develops from:
p. **Thalamus**
a. Ovary
b. Ovule
c. Pedicel
233. A complete flower has:
a. 5 whorls
b. 3 whorls
c. 2 whorls
q. **4 whorls**
234. Kinnow seed is:
r. **Polyembryonic**
a. Monoembryonic
b. Multiembryonic
c. None
235. Apomictic seedlings are also called as:
s. **Nucellar seedlings**
a. Sexual seedlings
b. Embryonic seedlings
c. None
236. Cherry is a:
a. Berry fruit
t. **Stone fruit**
b. Pome fruit
c. Drupe
237. Seed of strawberry fruit is:
u. **Achene**
a. True seed
b. Viable seed
c. Aborted seed
238. Mulberry is a fruit of type:
a. Multiple
b. Berry
v. **Aggregate**
c. Peppo
239. The biggest fruit plant containing family is:
w. **Rosaceae**
a. Citrea
b. Leguminoseae
c. Vitaceae
240. Chilling injury in plants occurs at a temperature:
a. $<4^{\circ}\text{C}$
x. **$<5^{\circ}\text{C}$**
b. $<8^{\circ}\text{C}$
c. $<9^{\circ}\text{C}$
241. Both Mango and Pistachio belongs to one family:
y. **Anacardiaceae**
a. Mangifera
b. Gramineae
c. None

242. **Date palm is also called as:**
z. Feather palm
a. Wild palm
b. Century palm
c. Domestic palm
243. **Green hard stage of date fruit is:**
a. Kimri
b. Rutab
c. Doka
d. Dung
244. **Date fruit for curring is harvested at:**
e. Rutab stage
a. Tamar stage
b. Dung stage
c. None
245. **Banana fruit is called as**
f. Finger
a. Hand
b. Heart
c. None
246. **Peaches belongs to family**
g. Rosaceae
a. Rutaceae
b. Palmaceae
c. None
247. **Kumquat fruit is edible**
h. Whole fruit
a. Without peel
b. With seed
c. None
248. **Guava is a rich source of**
a. Vitamin C
b. Pectin
c. a & b
d. Sugar
249. **Common rootstock for citrus in Punjab**
i. Rough lemon
a. Sour orange
b. Sweet orange
c. Sweet lime
250. **Pruning is a regular practice in date palm variety**
a. Hillawi
b. Khudrawi
j. Deglet Noor
c. Hillini
251. **Excess of N in citrus plant may cause**
a. Leaf drop
b. Lodging
k. Flower drop
c. Fruit drop
252. **Alternate bearing is a problem of following fruit crops**
a. Mango
b. Apple
c. Citrus
l. All of above

253. Citrus can tolerate a salinity level
- a. pH 9.0
 - m. pH 8.5**
 - b. pH 7.5
 - c. pH 4.5
254. Male inflorescence of Cashew nut and Walnut is called
- n. Catkins**
 - a. Rachis
 - b. Cyme
 - c. None
255. “Hari” is a rootstock for
- a. Walnut
 - o. Apricot**
 - b. Mulberry
 - c. None
256. Apple bears on
- a. Shoots
 - b. Sprigs
 - p. Spurs**
 - c. Twigs
257. Bearing habit of mango is
- q. Terminal**
 - a. Lateral
 - b. Axillary
 - c. Basal
258. Polyembryony means
- a. One embryo
 - b. Two embryo
 - c. More than two embryo
 - r. More than three embryo**
259. Head in fire, foot in water is a proverb for
- a. Olive
 - b. Coconut
 - s. Date palm**
 - c. None
260. Pears are
- a. Universally self compatible
 - t. Universally self incompatible**
 - b. Gross compatible
 - c. None
261. Quince is a common rootstock for
- a. Peach
 - b. Plum
 - u. Pear**
 - c. Pomegranate
262. Parienth is the fnion of
- a. Calyx and Corolla**
 - b. Pedicel and Thalamus
 - c. Stamen and Stigma
 - d. Style and Ovary
263. Spur is defined as
- a. Mature productive wood
 - b. Inmature juvenile wood
 - c. a & b
 - e. Mature wood with rosette head**

264. **Chimera refers to**
f. **Somatic cell fusion**
a. Gametic cell fusion
b. Undifferentiated cell
c. None
265. **Metaxenia is the impact of**
a. Pollen on seed
g. **Pollen on fruit**
b. Pollen on ovule
c. Pollen on ovary
266. **Senescence is a stage of**
h. **Tissue decay**
a. Tissue multiplication
b. Tissue vigour
c. Tissue ripening
267. **Rest is a natural process in**
a. Seed
i. **Seed & plant**
b. Plant
c. Tropical plant
268. **Dormancy in plant and seed is mainly due to**
a. Environmental factor
b. Physiological factor
c. **a & b**
d. None
269. **Petiole is a main part of**
a. Flower
j. **Leaf**
b. Inflorescence
c. Twig
270. **Micropyle is an opening in**
a. Stomata
k. **Seed**
b. Ovary
c. Flower
271. **Skirt in date palm fruit is**
a. Exocarp
b. Merocarp
l. **Endocarp**
c. Seed
272. **Recommended matrix height in citrus is**
a. 4 inches
b. 6 inches
m. **9 inches**
c. 12 inches
273. **Common rootstock used for sweet orange in NWFP.**
n. **Sour orange**
a. Rough lemon
b. Citrumello
c. None
274. **Berry splitting in citrus and strawberry is due to**
o. **High temperature**
a. Low moisture
b. High sunlight
c. High air pressure

275. **Mango varieties in Pakistan are**
p. Monoembryonic
a. Polyembryonic
b. Mono to Polyembryonic
c. None
276. **Asexually apple rootstocks is raised by**
a. Grafting
b. Budding
q. Stooling
c. Layering
277. **Lemons and limes can also be propagated by**
a. Layering
b. Cuttings
c. a & b
d. None
278. **Common rootstocks for apple in Pakistan**
a. M-7
b. M-9
r. Crab apple
c. Sky spur
279. **Systematic pomology deals with**
a. Commercial fruit production
s. Nomenclature
b. Domestic production
c. Export production
280. **The Genus Fortunella include :**
a. 7 spp.
b. 6 spp.
c. 5 spp.
t. 4 spp.
281. **Genus Poncirus has**
u. 1 spp.
a. 3 spp.
b. 6 spp.
c. 16 spp.
282. **Best time of propagation of fruit plants in sub tropical region is :**
v. Spring season
a. Spring & autumn season
b. Summer season
c. Summer and winter season
283. **Major insect attacking the summer crop of guava during summer crop is :**
a. White fly
b. Fire fly
w. Fruit fly
c. Drosophilla fly
284. **Grapevine needs :**
x. Bulk pruning
a. Light pruning
b. Moderate pruning
c. No pruning
285. **A self supporting vine type stem is called.**
a. Vine
b. Shrub
c. Herb
y. Liana

286. **Edible part of pomegranate is**
a. Seed
b. Vesicles
c. Mesocarp
a. Aril
287. **Apple and pears are classified as**
a. Drupe
b. Pome
b. Berry
c. Hesperidium
288. **Nut fruits are derived from**
a. Epigynous flower
c. Hypogynous flower
b. Perigynous flower
c. Hypo and perigynous flower
289. **Strawberry is a fruit of type.**
d. Multiple
a. Achene
b. Berry
c. Aggregate
290. **The coldest region for citrus growing is**
e. U.S.A.
f. New Zealand
a. Australia
b. Pakistan
291. **The three important genera of Anacardiaceae family are.**
a. Mangifera, Pistacia and Cocos
b. Eugenia, Anacardium, Pistacia
g. Pistacia, Mangifera, Anacardium
c. Psidium, Aurantium, Mangifera
292. **Chromosome number of mango are**
h. n=20
a. n=17
b. n=8
c. n=11
293. **Unfertile stamens of mango are called.**
a. Sterile
b. Indehiscent
i. Staminoides
c. Pistilloids
294. **Mango flower carries fertile stamens which are.**
j. One
a. One or two
b. Three
c. One or three
295. **Low temperature regime in summer which stops growth of mango is :**
a. 35°F
b. 30°F
c. 20°F
k. 18°F
296. **Canary date differs from cultivated date in**
l. Length of fronds
m. Arrangement of pinnus
n. Thickness of stem
o. Area of origin

297. Wild dates (*P. sylvestris*) is important due to
- a. Nutritious fruit
 - b. Sweetness of fruit
 - c. Sugar production
 - p. **Medicinal value.**
298. Maximum production of date palm is in:
- a. Iran
 - b. Algeria
 - c. U.S.A.
 - q. **Iraq**
299. Apple belongs to the family
- a. Anacardiaceae
 - b. Palmaea
 - c. Rutaceae
 - r. **Rosaceae**
300. Apple is a fruit of
- s. **Temperate region**
 - a. Sub tropical
 - b. Tropical
 - c. Temperate and sub tropical
301. Apple flower has carpels like
- t. **Five**
 - a. Six
 - b. Seven
 - c. One
302. Date growth does not cease if temperature does not fall below:
- a. 0°C.
 - b. 10°C
 - u. **18°C**
 - a. 20°C
303. Seedless date palm variety is:
- v. **Hassaku**
 - a. Hillai
 - b. Ajwa
 - c. None
304. Pruning is carried out in date palm variety:
- w. **Deglet Noor**
 - a. Hillawi
 - b. Khudrawi
 - c. Ajwa
305. Date palm propagation is by means of:
- x. **Suckers**
 - a. Seeds
 - b. Off shoots
 - c. None
306. Mushroom seed is called:
- y. **Spawn**
 - a. Seed
 - b. Button
 - c. None
307. Mushroom are cultivated on:
- a. On soil
 - b. Hydroponic
 - z. **Dead mass**
 - c. On trees

308. **Banana plants are infected with:**
aa. Banana bunchy top
a. Anthracnose of stem
b. Rhizome wilt
c. None
309. **Banana fruit bunch is called:**
a. Hand
b. Heart
c. Finger
d. All of above
310. **Banana plant bears in it's life time:**
e. Once in life
a. Twice in life
b. Multiple times
c. All of above
311. **Banana propagation is carried out through:**
f. Sword sucker
a. Water suckers
b. Aerial suckers
c. All of above
312. **Banana is a fruit type of:**
a. Non climacteric
g. Climacteric
a. Recurrent climacteric
b. All of above
313. **Apple and pear belongs to:**
a. Same genus
h. Different sub genus
a. Different genera
b. All of above
314. **Apple is a rich source of mineral:**
a. Carbohydrates
b. Proteins
c. Vita-A
i. Iron
315. **Apple bears on spurs in cluster of:**
a. 3 Flowers
b. 4 Flowers
j. 5 Flowers
c. More than all above
316. **Apple flower is distinguished from pear flower:**
a. Due to its colour
b. Due to its size
c. a & b
d. None
317. **Honey extracted from almond flower is inedible due to:**
k. Amygdalus factor
a. Oxalic acid
b. a & b
c. None
318. **Almond and peach belongs to:**
a. Same genus and spp.
l. Some germs & different spp.
b. Different genus & different spp.
c. All of above

319. Different mango varieties can be distinguished on the basis of:

m. New leaf colour

- a. Panicle length
- b. Number of male flowers
- c. All of above

320. Salt tolerant fruit plants are:

- a. Date and Ber
- b. Ber and Guava

n. a & b

- c. None

321. Adopted planting system of orchard in Pakistan is:

o. Square system

- a. Rectangular system
- b. Hexagonal system
- c. All of above

322. RCBD stands for:

- a. Repeated control block design
- b. Reported complete block design

p. Randomized complete block design

- c. All of above

323. Nitrogen in plant sample is estimated by:

- a. Refreshrometer

q. Kjeldhal's apparatus

- b. Spectrophotometer
- c. All of above

324. Jaman has a medicinal value against:

r. Diabetes

- a. Cancer
- b. Blindness
- c. All of above

325. Chinese layering is practiced in:

- a. Mulberry
- b. Strawberry

s. Litchi

- c. All of above

326. Abscission in fruit occur due to:

t. Excessive abscissic acid

- a. Excessive Ghrtamic acid
- b. Excessive Lactic acid
- c. Excessive Citric acid

327. Button in citrus fruit is:

- a. Calyx at base
- b. Calyx at apex
- c. a & b
- d. All of above

328. Pomology is a study of

u. Fruit plants

- a. Pome fruit
- b. Medicinal plants
- c. Deciduous plants

329. The microsporogenesis is the formation of

v. Male gamete

- a. Female gamtete
- b. Female and male gamete
- c. Non of these

330. Physiological aging activity in which plant tissues degenerate and ultimately die is called
a. **Senescence**
b. Ripening
c. Climacteric
d. Degeneration
331. Plants response to the relative length of daylight or darkness is known as:
a. long day
b. Short day
c. Neutral
e. **Photoperiodism**
332. Absciscic acid (ABA) is natural plant hormone, which:
a. Promote the growth
b. Initiate the ripening
c. Induce the fruit maturity
f. **retards the growth**
333. The development of fruit without fertilization or seed is called as:
a. Pollination
b. polyembryony
c. pseudogamy
g. **Parthenocarpy**
334. The commercial yield of citrus orchards in tropical and subtropical are commonly:
a. Equal
h. **50% less in tropical than subtropical regions**
a. 50% more in tropical than subtropical regions
b. All wrong
335. High nitrate supply helps to _____ maximum carbohydrates:
i. **Utilize**
a. Store
b. Synthesize
c. Increase
336. Nuceller seedlings are also called as:
a. Monoembryony
b. Zygotic seedling
j. **Polyembryony**
c. None of them
337. A change in genetic constitution, which arises suddenly and not to segregation and recombination of genes in sexual reproduction is called as:
a. Hybridization
b. Bud variation
k. **Mutation**
c. Non of them
338. Spongy tissue in mango is due to
a. Fungul disease
b. Viral disease
c. Bacterial disease
l. **Physiological disorder**
339. The soil moisture conservation technique under covered ground area is called:
a. Fertigation
m. **Mulching**
b. Microjet irrigation
c. Hydraulic
340. Bananas main portion which remains above the ground is called as:
a. Stem
b. Rhizome
n. **Pseudostem**
c. Crown

341. Low temperature helps to _____ growth inhibitors:
- Increase
 - Decrease**
 - Store
 - Produce
342. Gross Michel is high yielding variety of:
- Papaya
 - Grapes
 - Banana**
 - Litchi
343. Shamber is variety of Grape fruit in which pulp is;
- Pigmented and seedless**
 - White and seedless
 - Pigmented but seeded
 - White and seeded
344. The foster is variety of :
- Mandarin
 - Sweet orange
 - Pummelos
 - Grape fruit**
345. The non-climacteric fruit is
- Banana
 - Mango
 - Apple
 - Citrus**
346. Bunchy top disease in banana is said to be due to:
- Virus**
 - Insects
 - improper storage
 - fungus
347. Severe pruning in grapes is recommended:
- Every year**
 - After two year
 - After three year
 - None of them
348. King of temperate fruit is:
- Mango
 - Citrus
 - Banana
 - Apple**
349. Reproduction of plants through seeds are also called:
- Asexual propagation
 - Vegetative propagation
 - Sexual propagation**
 - Tissue culture
350. The plants shed their leaves during autumn are called;
- Evergreen
 - Deciduous**
 - Hardy plants
 - Non of them
351. Ripened ovary is called as:
- Flower
 - Seed
 - Fruit**
 - Embryo

352. Pollination between two such flowers situated on the same plant is known
- a. Autogamy
 - z. Allogamy**
 - b. Cross pollinated
 - c. None of these
353. A good example of dioecious plant is
- a. Apricot
 - b. Pear
 - c. Plum
 - d. Papaya**
354. Sensation is the variety of:
- a. Sweet orange
 - b. Grape fruit
 - c. Mandarin
 - e. Mango**
355. Tomato nursery established during September could be transplanted in the field during :
- f. October**
 - a. November
 - b. November/December
 - c. January/February
356. The variety originated from a cross of King X Willow leaf is:
- a. Clementine
 - b. Fair child
 - c. Feutrell's early
 - g. Kinnow**
357. Causes of misshapen and angularity in cucumber fruit under tunnel is due to
- h. Poor pollination**
 - a. Poor fertilization
 - b. Proper pollination
 - c. None
358. In citrus 80-90% of the active roots are present in the soil to a depth of:
- a. 25 cm**
 - b. 50 cm
 - c. 75 cm
 - d. 100 cm
359. Fleshy fruit with thin skin, not formed from the ovary but from another part of the plant is known as:
- a. Berry
 - b. Drupe
 - c. Stone fruit
 - d. Pome**
360. The fruits which do not naturally open to shed seed are known as:
- a. Dehiscent fruit
 - b. Fleshy fruit
 - c. Dry fruit
 - e. Indehiscent fruit**
361. The example of above ground modified stem is
- f. stolons**
 - a. Corms
 - b. Tuber
 - c. Rhizome
362. Edges of the leaf are called
- g. Margin**
 - a. Midrib
 - b. Veins
 - c. Petiole

363. In citrus, 2n chromosome number is
a. **18**
b. 22
c. 33
d. 20
364. Botanical name of sweet orange is
a. C. citrii
b. C. chinensis
h. **C. sinensis**
c. Non of them
365. Sweet orange requires
a. Dry and semi arid conditions
i. **Dry and sub humid conditions**
b. Wet and sub humid conditions
b. Non of these
366. Zinc deficiency in sweet orange causes
a. Chlorosis in fruit
j. **Chlorosis in leaves**
b. Streaks on leaves
c. sweetness of fruit.
367. Antagonistic effect of Fe on Zn availability in sweet orange causes:
a. Leaf drop
b. Fruit drop
c. Reduce fruit weight
k. **Zn deficiency**
368. Blooming in mango occurs:
l. **February to Mid April**
a. January to first week of February
b. September-October
c. May – June
369. The whole inflorescence in mango is called as
a. Spike
m. **Panicle**
b. Spath
c. Non of these
370. High seed germination in cucumber occurs under temperature range of:
n. **20-25°C**
a. 25-30°C
b. 15-25°C
c. None of above
371. Maximum number of flowers in mango are borne on
a. August flush
b. June flush
c. May flush
o. **April flush**
372. The fruit of mango is
a. False fruit
b. Pome fruit
p. **Drupe fruit**
c. Stone fruit
373. Inarching is also called as
a. cutting
b. Budding
q. **approach grafting**
c. non of these

374. Anthracnose of mango is:
- r. **Fungal disease**
 - a. Viral disease
 - b. Physiological disorder
 - c. Non of these
375. One year old branch of plant is
- a. sprigs
 - b. Mature branch
 - s. **twigs**
 - c. Non of these
376. Guava is grown on large scale in
- a. Quatta
 - b. Multan area
 - t. **Sheikhupura area**
 - c. Bahal pur area
377. All commercial date palm orchards in Pakistan are pollinated by
- a. Insects
 - b. Winds
 - c. Natural
 - u. **Manual**
378. Umran No. 9 and 13 are the varieties of
- a. Loquat
 - b. Grapes
 - c. Banana
 - d. **Ber**
379. Flower bearing in ber occurs during
- a. Spring
 - b. Winter
 - c. Summer
 - e. **Autumn**
380. East Malling is a root stock for
- f. **Apple**
 - g. **Loquat**
 - a. Musambi
 - b. Pine apple
381. Low chilling varieties of apple
- a. Tropical Beauty
 - b. **Enna**
 - c. Non of these
 - d. All of these
382. Stooling is also called as
- a. Sexual propagation
 - b. Cutting
 - c. Gooti layering
 - e. **Mound layering**
383. Good soil management ensures
- a. Good supply of organic matter
 - b. Prevent the soil erosion
 - c. Preserves moisture
 - f. **All of the these**
384. Apple require relatively
- g. **High K and low P**
 - a. High P and low K
 - b. Equal K and P
 - c. No K and P

385. **Full grown apple tree requires**
- a. No FYM
 - b. Very low FYM
 - c. 40-50 Kg FYM
 - h. 80-100Kg FYM**
386. **Irrigation during blooming in apple**
- a. Help to increase the fruit set
 - i. Harm full to fruit set**
 - b. Shows no response
 - c. Reduce the fruit development
387. **Cross pollinated in apple generally produce**
- a. Bad results than self pollinated
 - j. Better results than self pollinated**
 - b. Same results as self pollinated
 - c. Non of these
388. **In sweet orange pre-harvest fruit drop is**
- a. Seldom experienced
 - b. Never experienced
 - c. common experienced
 - k. Problems of the area**
389. **The sweet orange is a**
- l. Loose skinned
 - m. Tight skinned**
 - a. Both of them
 - b. Non of these
390. **Sweet orange belongs to the family**
- a. Malvaceae
 - b. Rotaceae
 - c. Rutaceae
 - d. Chenopodiaceae
391. ***Citrus reticulat* Blanco is the botanical name for**
- a. Sour lime
 - b. Mandarin**
 - c. Both of a and b
 - d. None of these
392. **Tap roots of plants are also called as**
- a. Secondary roots
 - b. Adventitious roots
 - e. Primary roots**
 - c. Tertiary roots
393. **The parts of stem from which a leaf arises is called**
- f. Node**
 - a. Internodes
 - b. Apex
 - c. Bud
394. **The plants which live for only a single season are called**
- a. Herbs
 - b. Perennials
 - c. Biennials
 - g. Annuals**
395. **Plants, soft and green, and can be easily bent is known**
- h. Herbaceous**
 - a. Woody
 - b. Shrubs
 - c. Non of these

396. The bud which develop into the axils of a leaf is
i. **Axillary buds**
a. Terminal buds
b. Adventitious buds
c. Naked buds
397. In some plants the buds contain both leaves and flowers and known as
a. Leaf buds
b. Flower buds
c. Scaly buds
j. **Mixed buds**
398. A slender trailing stem taking roots at the node is
k. **Runner**
a. Rhizome
b. Tuber
c. Bulbs
399. The stamens are the male organs of flower which are also called
a. Pistil
b. Gynoecium
l. **Androecium**
c. Carpel
400. Special leaf which bears a flower or cluster of flowers in its axils is called
m. **Bracts**
a. Compound leaf
b. Simple leaf
c. Non of these
401. The terminal part of the pedicel bearing the sepals, petals, stamens and carpals is called
a. Pedicel
b. Inflorescence
n. **Thalamus**
c. Non of these
402. Peduncle is a main axis of the
a. leaf
b. Flower
o. **Inflorescence**
c. Bud
403. An inflorescence in which the pedicels of the flowers arises from the same points as called
p. **Umbel**
a. Spike
b. Catkin
c. Uninate
404. A group of flowers on an axis is called
q. **Solitary axillary flower**
a. Solitary terminal flower
b. Inflorescence
c. Modified flower
405. The nutritive tissue around the embryo in seed is
a. Endosmosis
b. Endodermis
r. **Endosperm**
c. Embryo-sac
406. Bracts situated out side the calyx in certain flowers are called
s. **Epicalyx**
a. Epibasal
b. Epicarp
c. Epidermis

407. The germination of seed in which cotyledons come above ground is
t. **Epigeal**
a. Hypogeal
b. Epigynous
c. Epipetalous
408. A sexual cell in plants is called
u. **Gamete**
a. Gametophyte
b. Gamopetalous
c. Gamosepalous
409. A flower which has all the usual parts sepals, petals, stamens and carpel is called
a. hermaphrodite
v. **Complete**
b. Pistilate
c. Incomplete
410. The situation in which a plant grows wild is called
a. **Habitat**
b. Halophytes
c. Helicoids
d. Haustorium's
411. Proteins are most complex organic compounds, containing
a. Carbon
b. Hydrogen
c. oxygen and nitrogen
e. **All of these**
412. Pine apple is a source of
a. Vitamin C
b. Vitamin A
c. Vitamin B
f. **All of these**
413. Papaya is still being commercially propagated from
a. Cutting
b. Suckers
g. **Seeds**
c. Grafting
414. For good pollination in papaya orchard it is necessary that male plants should be
h. **5-10%**
a. 40-45%
b. 50-55%
c. 70-75%
415. Silver Oak belongs to family:
a. Rosaceae
b. Palmae
c. Oleaceae
i. **Proteaceae**
416. Pollination in tomatoes under tunnel production is carried out by:
a. Honey bees
b. Bumble bees
c. House flies
j. **Vibration**
417. Dwarfing rootstock for apple in heavy soils is:
a. M-7
k. **M-9**
b. M-11
c. Crab apple

418: Rate of ethylene production in citrus is comparatively_____ than in mango.

- a. Higher
- l. Lower**
- b. Equal
- c. Unknown

419: Lemons are usually degreened at:

- a. 6°C
- b. 16°C**
- c. 26°C
- d. 30°C

420: Postharvest fungicidal treatment of mango fruit is done with:

- m. Thiobendazole (TBZ)**
- a. Ethylene Dibromide (EDB)
- b. Above both
- c. None of above

421: _____ variety of apple is reported to perform well at lower altitudes.

- n. Enna**
- a. Amri
- b. Diana
- c. Golden Delicious

422: Dhaki variety of date palm was originated in:

- o. NWFP**
- a. Sindh
- b. Balochistan
- c. Punjab

423: Which of the following vegetable crop is a relative of cotton:

- p. Okra**
- a. Onion
- b. Mustard
- c. Brinjal

424: In pineapple sweet orange, fruit drop in month of June is upto:

- a. 66%
- b. 76%
- c. 86%
- q. 96%**

425: Hodgson divided genus citrus into:

- a. 16 species
- b. 26 species
- r. 36 species**
- c. More than 36 species

426: In Pakistan, yield of potato range between :

- a. 10-15 ton
- b. 15-20 ton
- s. 20-25 ton**
- c. 25-30 ton

427: Motia (ornamental) belongs to family:

- t. Oleaceae**
- a. Moraceae
- b. Rosaceae
- c. Nyctaginaceae

428: Rubber plant (ornamental) belongs to family:

- a. Oleaceae
- u. Moraceae**
- b. Rosaceae
- c. Nyctaginaceae

- 429: Bougainvillea (ornamental) belongs to family:**
- a. Oleaceae
 - b. Moraceae
 - c. Rosaceae
 - v. Nyctaginaceae**
- 430: Germination percentage in sour orange rootstock is:**
- a. 50-60%**
 - a. 61-70%
 - b. 71-80%
 - c. 81-90%
- 431: In Kinnow mandarin, fruit drop in month of June is upto:**
- a. 70%
 - w. 75%**
 - b. 80%
 - c. 85%
- 432: Following species of citrus can be propagated through cutting.**
- b. Sweet orange
 - x. Sweet lime**
 - c. Kaghzi lime
 - d. Non of above
- 433: Following species of citrus can be propagated through layering.**
- a. Sweet orange
 - b. Sweet lime
 - y. Kaghzi lime**
 - c. None of above
- 434: In Punjab, most of the fresh vegetable production is carried out:**
- a. Near cities**
 - b. Near rivers
 - c. Near canals
 - d. All of above
- 435: Which of the following crop has high sulphur contents:**
- a. Garlic
 - e. Onion**
 - a. Radish
 - b. None
- 436: During propagation through cuttings, which hormone(s) is/are used for root promotion?**
- a. ABA
 - f. Seradix**
 - b. NAA
 - c. All above
- 437: Araucaria was originated from:**
- g. South Pacific**
 - a. South Asia
 - b. Far East
 - c. Middle East
- 438: Rubber plant can be propagated through:**
- a. Aerial layering
 - b. Cutting
 - h. All above**
 - c. None of above
- 439: Silver Oak produces seeds after age of:**
- a. 1 year
 - i. 5 years
 - j. 10 years**
 - b. 15 years

- 440: Which of the following plants are used for the extraction of scent?**
- a. Rose
 - b. Murva
 - c. Citrus
 - d. All of above**
- 441: The first ever auxin discovered was:**
- a. IBA
 - b. IPA
 - e. IAA**
 - c. None of above
- 442: Mowing of grasses in winter is recommended after:**
- a. 20-30 days
 - b. 30-40 days
 - c. 40-50 days
 - f. Both 'b' and 'c'**
- 443: Major types of greenhouse are**
- a. Even span
 - b. Lean to
 - g. Odd span**
 - c. a & b
- 444: At the time of transplanting, weight of date palm sucker should be:**
- a. 5-10 kg
 - h. 10-20 kg**
 - b. 20-30 kg
 - c. Less than 5 kg
- 445: Following plant(s) is/are propagated through seed.**
- a. Murva
 - b. Bottle palm
 - c. None of above
 - i. All above**
- 446: Citrus seeds can be stored with Charcoal at following temperature in dry conditions.**
- a. 0-3°C
 - j. 3-10°C**
 - b. 10-15°C
 - c. Above 15°C
- 447: Seed germination percentage of rough lemon is:**
- a. 50-60%
 - k. 60-70%**
 - b. 70-80%
 - c. 80-90%
- 448: Most serious insect/pest(s) of apple is/are:**
- l. Codling moth**
 - a. Fruit fly
 - b. All above
 - c. None of above
- 449: Postharvest fumigation of citrus used to be done with:**
- a. Thiobendazole (TBZ)
 - m. Ethylene Dibromide (EDB)**
 - b. Above both
 - c. None of above
- 450: Soil compaction _____ yield of potato.**
- a. Increases
 - n. Decreases**
 - b. Does not effect
 - c. Unknown

- 451: Cost benefit ratio in potato production should range:**
a. 1:5
b. 1:10
c. 10:1
o. Both 'a' and 'b'
- 452: "Thalsa" is a variety of potato very suitable for the region of:**
p. Peshawar
a. Tandojam
b. Mir Pur Khas
c. Sahiwal
- 453: Yield of carrot is maximum at pH:**
q. 6.5
a. 7.5
b. 8.5
c. Below 6.5
- 454: Temperate varieties of carrot have _____ life cycle.**
a. Annual
r. Biennial
b. Perennial
c. Unknown
- 455: Which of the following vegetable is also called as 'poor man's food'?**
a. Carrot
s. Onion
b. Redish
c. Potato
- 456: Which of the following factor(s) is/are more suitable for good onion production?**
a. High temperature
b. Long photoperiod
c. None of above
t. All above
- 457: Green potato tuber is inedible due to:**
u. Carcinogenic
a. Hardness
b. Hollowness
c. None of above
- 458: CRD is a statistical approach for:**
a. Field experiment
v. Laboratory experiment
b. a & b
c. None
- 459: Soft nose is a disorder of:**
a. Date fruit
b. Citrus fruit
w. Mango fruit
c. Apple fruit
- 460: Guava seed before germination requires:**
a. Fungicide treatment
b. Chemical treatment
x. Commercial grade H_2SO_4 treatment
c. All of above
- 461: Fruit splitting in pomegranate and litchi is due mainly to:**
a. Water pressure
b. Dry ness of air
c. Nutritional defects
y. All of above

- 462: Production of vegetable out of their normal season of outdoor production is known as:**
z. Vegetable forcing
a. Out of season
b. Crop production
c. Tissue culture
- 463: Yellow wasp is a major pest of:**
aa. Grape fruit
a. Peach fruit
b. Citrus fruit
c. Mango fruit
- 464: The only pest of date fruit at green hard stage is:**
a. Nightangale
bb. Parrot
b. Sparrow
c. All of above
- 465: Study which deals with the microscopic structure of tissue is called:**
a. Anatomy
cc. Histology
b. Taxonomy
c. Ecology
- 466: Study of plant species in relation to its environmental history is called:**
dd. Phylogeny
a. Histology
b. Ontogeny
c. None of these
- 467: Elevation of temperate region from sea level ranges:**
a. 1000-2000 m
b. 2500-3000 m
c. 3500-4000 m
d. b & c
- 468: Banana belongs to type of fruit, in which the edible portion is:**
a. Mesocarp
b. Syconus
ee. Berry
c. Drupe
- 469: Almond is a drupe fruit, in which the edible portion is:**
a. Pericarp
b. Thalmus
ff. Seed
c. Mesocarp
- 470: Frond length of cultivated date ranges:**
a. 3-5 m
b. 3-4 m
c. 2-3 m
d. 1-2 m
- 471: The most important characteristics of tropical region are:**
a. Snowfall
b. Frost
c. Winds
d. High temperature
- 472: Addition of _____ hastens the time of fruit bud differentiation in fruit plants:**
a. Nitrites
b. Nitrides
e. Nitrates
c. All of these

- 473 More hormones are accumulated in plants due to accumulation of _____:
a. Nitrate
b. Starch
c. Protein
d. Vitamins
- 474 Reproductive phase of fruit plants is improved by the accumulation of _____:
a. Nitrogen
e. Starch
a. Proteins
b. Cellulose
- 475 Pruning in old fruit trees increases fruit bud formation by increasing _____:
a. Carbohydrates
f. New vegetative growth
a. Hormonal contents
b. Cell sap
- 476 At a temperature slightly above optimum, carbohydrates are _____:
a. Produced
b. Stored
g. Utilized
a. Increased
- 477 Apical bud becomes _____ in mango at fruit bud differentiation :
a. Flattened
b. Rounded
h. Dome shaped
a. Elongated
- 478 The phase of fruit bud formation continues until _____:
i. Anthesis
a. Petal formation
b. Pollination
c. Differentiation
- 479 The development of flower bud in tuberose is :
a. Basipetal
b. Exipetal
c. Endopetal
j. Acropetal
- 480 Rate of bud development is _____ upto winter season :
a. Slow
k. Rapid
b. Medium
c. Constant
- 481 Dormancy is a function of interaction of growth promoter like GA and growth inhibitor like _____:
l. ABA
a. Cycocell
b. Alar
c. Paclobutrazole
- 482 Dormancy of seed is a biological mechanisms that provides protection against _____:
a. Seed spoilage
b. Embryo abortion
m. Pre mature germination
c. Dehydration
- 483 The major metabolic process which takes place in the harvested produce is _____:
a. Ripening
n. Respiration
b. Softening
c. Senescence

- 484 At fruit bud differentiation in mango, C/N ratio is _____:
- a. Low
 - b. Medium
 - o. High**
 - c. Very High
- 485 Annual bearing apples differentiate much greater proportion of their flowers on _____:
- a. Spurs
 - p. Shoots**
 - b. Leaf axils
 - c. Main stem
- 486 Self fertility refers to the ability of a variety to produce fruits with viable ____:
- a. Pollens
 - q. Seeds**
 - b. Ovules
 - c. Ovaries
- 487 Flowers having stigma below the highest anthers are called _____:
- r. Apistigmatic**
 - a. Hypostigmatic
 - b. Peristigmatic
 - c. Exostigmatic
- 488 Failure of a viable pollen to grow down the style of the flower of the same variety is called _____:
- a. Self sterility
 - s. Self incompatibility**
 - b. Self unfruitfulness
 - c. Sterility
- 489 Piping is carried out in
- a. Chrysanthemum
 - b. Rose
 - c. Gladiolus
 - t. Carnation**
- 490 Chlorophyll formation takes place within a light wavelength of _____:
- a. 150-200
 - b. 200-300
 - u. 300-675**
 - c. 700-900
- 491 Root formation is promoted in softwood cuttings under light intensity of _____ foot candles:
- a. 100-150
 - v. 150-200**
 - b. 200-250
 - c. 250-350
- 492 Fruiting body of roses is called:
- a. Button
 - w. Hips**
 - b. Slip
 - c. None of above
- 493 Apple and pear form their flowers buds in _____:
- a. May-June
 - x. July-August**
 - b. September-October
 - c. November-December
- 494 Volatile oil are those oil which can evaporate at :
- y. 25°C**
 - a. 40°C
 - b. 50°C
 - c. 65°C

- 495** The renewal of NO_3 involves release of _____ from organic fraction of the soil and its rapid nitrification:
- a. NO_2
 - z. NH_4**
 - b. N
 - c. NO
- 496** Most of Nitrogen is used in the decomposition of _____ and thus plant shows deficiency symptoms :
- a. Amino acids
 - b. Cellulose**
 - c. Carbon compounds
 - d. Organic matter
- 497** Toxicity of Mg can be modified by adding _____:
- a. N
 - b. PO_4
 - c. Ca**
 - d. K_2O
- 498** Injurious effects of sulphates can be replaced with the addition of _____:
- a. Nitrates**
 - b. Phosphates
 - c. Ammonia
 - d. Ca & Mg
- 499** Internal browning in apples takes place due to _____:
- a. Fungus
 - e. High temperature**
 - b. Hail storm
 - c. Bacteria
- 500** Onion seeds can germinate at a temperature of :
- a. $0-1^\circ\text{C}$
 - b. $1-5^\circ\text{C}$**
 - c. $5-11^\circ\text{C}$
 - d. $15-20^\circ\text{C}$
- 501.** Dead heading is the removal of
- a. Dead branches
 - f. Dead roots
 - g. Faded flowers**
 - b. Shriveled leaves
- 502.** Hygrometer is used to measure
- a. Pressure
 - h. Humidity**
 - b. Wind speed
 - c. Solar radiation
- 503.** Pinching out is the removal of
- a. Growing point of root
 - b. Opening flower buds
 - i. Growing point of buds**
 - c. Removal of seeds
- 504.** A thread-like stem or leaf which clings to any support, is known as
- a. Climber
 - j. Tendril**
 - b. Sucker
 - c. Creeper
- 505.** A plant which is able to live under very dry conditions is called
- k. Xerophyte**
 - a. Hallophyte
 - b. Mesophyte
 - c. None of above

506. Removal of young flower buds to allow maximum development of the remainder is termed as:
- a. Die back
 - l. Disbudding**
 - b. Dead heading
 - c. None of these
507. Small, hair like outgrowth at the base of leaf stalk is termed as:
- a. Bud
 - b. Bract
 - m. Stipule**
 - c. Ligule
508. Pruning in narrow leave evergreens should be done during:
- a. Early fall
 - b. Winter
 - c. Summer
 - n. Early spring**
509. Which of the following plants require severe pruning?
- o. Lagerstromea purpurea**
 - a. *Nerium odorum*
 - b. *Jasminum sambac*
 - c. *Thuja orientalis*
510. Which of the following climbers is important for its hardiness and flowers throughout year?
- a. *Vitis vinifera*
 - p. Bongainvillea glabra**
 - b. *Tecoma grandiflora*
 - c. *Quisqalis indica*
511. Which of the following shrubs bears yellow flowers?
- a. *Jasminum sambac*
 - b. *Tabernamontana divertica*
 - q. Thevetia nerifolia**
 - c. *Hibiscus Rosa sinensis*
512. Which of the following grounds cover is highly salt tolerant?
- a. *Vinca rosea*
 - r. Bermuda grass**
 - b. *Musembreanthemum*
 - c. *Alternanthera*
513. Which of the following shrubs is used as fruit beauty?
- a. *Cassia glauca*
 - b. *Nerium odorum*
 - s. Citrus mitis**
 - c. *Hibiscus rosa sinensis*
514. Which of following trees has stem beauty?
- a. Eucalyptus
 - b. Sterculia
 - c. Royal palm
 - t. All of above**
515. English Ivy (*Hedera helix*) is
- u. Evergreen ground cover**
 - a. Evergreen shrub
 - b. Diciduous shrub
 - c. deciduous ground cover
516. *Jaccaranda mimosifolia* has
- a. Red flowers
 - b. Yellow flowers
 - c. White flowers
 - v. Purple flowers**

517. Which of the following is an evergreen shrub?
- a. *Lagerstromia indica*
 - w. **Pittosporum tobira**
 - b. *Caesalpenia pulchrema*
 - c. None of the above
518. Lawn grasses can be established by:
- a. Seeding
 - b. Sodding
 - c. Plugging
 - x. **All of the above**
519. Tifdwarf is a:
- a. Weed
 - b. Shrub
 - y. **Turfgrass**
 - c. None of these
520. Gladiolus is propagated through:
- a. Bulbs
 - z. **Corms**
 - b. Tubers
 - c. Rhizomes
521. Rose budded at 3 ½ feet height is called
- a. Miniature rose
 - b. **Standard rose**
 - c. Half standard rose
 - d. Climbing rose
522. Most house plants, except cacti, prefer a highly organic and
- a. Neutral growing medium
 - b. Alkaline growing medium
 - e. **Acidic growing medium**
 - a. None of above
523. *Ficus pimula* is a
- a. Shrub
 - b. Tree
 - f. **Creeper**
 - a. Annual
524. Which of the following tree is commonly used in the landscape of arid zone?
- a. *Ficus benjamina*
 - b. *Pethocelobium dulce*
 - c. *Pinus longifolia*
 - g. **Prosopis juliflora**
525. Which of the following shrubs has white fragrant flowers?
- a. *Tabernaemontana divertica*
 - h. **Gardenia florida**
 - a. *Thevitia nerifolia*
 - b. *Lantana comara*
526. Commercial flower crops are sometimes watered to cause leaching. This means:
- a. Watering to spread fertilizer nutrients more evenly throughout the plant root system
 - i. **Watering to remove excess soluble salts from the growing medium**
 - a. Watering only to wet the top 1/3 of the growing medium
 - b. Watering by subsurface methods
527. Most grass species utilized for turf are characterized by:
- a. Prostrate creeping
 - b. Fine to medium texture
 - c. Short basal nodes
 - j. **All of above**

528. Which of the following trees change foliage colour during winter?
- a. *Albizia lebbek*
 - b. *Delonix regia*
 - k. **Sapium sebeferum**
 - c. *Thuja orientalis*
529. Which of the following plants is known as dessert saroo?
- a. *Populus nigra*
 - b. *Bahinia varigata*
 - c. *Sapium seveferum*
 - l. **Casuarina equistifolia**
530. Which of the following climber belongs to family oleaceae?
- a. *Tecoma grandiflora*
 - b. *Lonicera japonica*
 - c. *Bougainvillea glabra*
 - m. **Jasminum grandiflora**
531. *Tecoma stans* is a
- n. **Shrub**
 - a. Tree
 - b. Creeper
 - c. None of above
532. Light intensity is expressed as:
- o. **Foot-candles**
 - a. Micrometers
 - b. Candlelights
 - c. All of the above
533. The purpose of staking is to
- a. Protect the trunk
 - b. Prevent root damage due to wind action
 - p. **Prevent wind injury to branches**
 - c. Prevent damage due to frost.
534. Japanese style of floral arrangement is known as:
- a. Ikenobo
 - b. Yen
 - q. **Ikebana**
 - c. Ying
535. Dacca is a selected variety of:
- a. Herb
 - b. Shrub
 - r. **Turfgrass**
 - c. None of these
536. Growing medium kept too wet will deprive the plant:
- a. Soluble salts
 - b. Water
 - s. **Oxygen**
 - c. Fertilizer
537. The interrelationship of size with floral arrangement to its surroundings is:
- a. Harmony
 - b. Rhythm
 - t. **Scale**
 - c. Balance
538. A climbing plant with woody stem is called
- u. **Vine**
 - a. Liana
 - b. Hedge
 - c. All of the above

539. Hard, thorny structures which protect the buds of woody plants during winter, are termed as:
- Nodes
 - v. Scales**
 - Bracts
 - None of all
540. A common example of incomplete flower is:
- Apetalous flower
 - Staminate flower
 - Pistillate flower
 - w. All of the above**
541. To preserve the germination ability of most seeds, store them in a:
- Warm, dry environment
 - x. Cool, dry environment**
 - Cool environment after scarification
 - Warm, moist environment after stratification
542. The soil pH level primarily controls:
- Soil temperature
 - Activity of soil-borne diseases
 - Moisture absorption by roots
 - y. Availability of essential plant nutrients**
543. Which of the following is a shade-loving flower?
- Marigold
 - Snapdragon
 - Chrysanthemum
 - z. Impatiens**
544. Plants which flower on the previous season growth:
- Should be pruned after flowering.
 - b. Does not need to be pruned**
 - Should be pruned in the dormant stage.
 - Should be cut back heavily in late summer.
545. The most common summer cooling system in greenhouses is:
- Package evaporative coolers
 - Fan-tube cooling system
 - Fog evaporative cooling
 - d. Fan-and-pad evaporative cooling**
546. All of the following are bulbous and tuberous-rooted plants except:
- Dahlias
 - Dutch iris
 - Caladiums
 - d. Snapdragons**
547. _____ involves incorporating water soluble fertilizer into the irrigation systems of greenhouse and nursery crops.
- Broadcasting
 - Fertilization
 - e. Fertigation**
 - Perforation
548. Which of the tree bears red colour flowers?
- f. Erythrena subrosa**
 - Albizia lebbek*
 - Sapium sebiferum*
 - Thuja orientalus*
549. Which of the plant is evergreen?
- Papulus nigra*
 - Bohinia verigata*
 - Euclyptus rostrata*
 - g. None of the above**

550. Lack of early spring flowering from tulip bulbs planted outdoors is due to:
- a. Bright sunlight
 - h. Lack of winter cooling**
 - b. Excessive moisture
 - c. Magnesium and calcium deficiencies
551. A leaf with parallel venation:
- a. Has leaflets
 - a. Is a monocot**
 - b. Has crossing veins
 - c. Is a compound leaf
552. When making hand-tied bouquets, the stems should be positioned:
- a. Parallel to each other
 - b. Perpendicular to each other
 - c. Any way that looks nice and holds together
 - i. In a spiraling manner**
553. Which of the following is not a method for sterilizing plant growing medium?
- a. Steaming
 - b. Baking
 - c. Using chemical fumigants
 - j. Keeping the growing medium moist for 6 to 7 days**
554. Which of the following is not among the major principles of design?
- a. Balance
 - b. Scale
 - c. Emphasis
 - k. Price**
555. The showy red, pink, or white portion of the poinsettia are:
- a. Flowers
 - l. Bracts**
 - b. Petals
 - c. Sepals
556. A technique to produce well branched, compact plants with many flowers is:
- a. Stunting
 - b. Compacting
 - m. Pinching**
 - c. Potting
557. Which of the following is a member of the Dianthus family?
- a. Chrysanthemum
 - b. Phlox
 - c. Sedum
 - n. Carnation**
558. Which of the shrub bears red colour flowers
- a. *Atriplex halimus*
 - b. *Tecoma stans*
 - o. Jatropha metrifieda**
 - c. *Jasminum sambac*
559. The acceleration of flowering by manipulating environmental conditions is known as:
- a. Pulsing
 - p. Forcing**
 - b. Leaching
 - c. After-ripening
560. Which shrub has white colour flowers with fragrance
- a. *Tabernaemontana divaricata*
 - b. *Hibiscus rosa chinensis*
 - c. *Thevetia perfoliata*
 - q. Jasminum sambac**

561. Peat is often mixed into the growing medium of container plants because it:
- a. Is inexpensive
 - r. **Has good air and water holding capacities**
 - b. Has a high pH
 - c. Absorbs excessive soluble salts
562. The two most practical means of the home owner to control insects and diseases are:
- a. Mechanical and chemical
 - s. **Mechanical and biological**
 - b. Chemical and biological
 - c. Biological and natural
563. In temperate climates, pruning should not be done near the end of the summer because:
- t. **New growth will not harden before winter**
 - a. It may increase foliage disease
 - b. Plants will not recover in time to produce new growth before winter
 - c. Sever “bleeding” from the cuts will kill the plant
564. A plant hardy in tropical zone will also be hardy in zone:
- a. Temperate
 - u. **Subtropical**
 - b. Arid
 - c. Semi-arid
565. A person who designs, establishes, and maintains small scale landscape project, is:
- a. The garden superintendent
 - b. The landscape nurseryman
 - v. **The garden center manager**
 - c. The landscape architect
566. During dry periods, landscape plants should be:
- w. **Watered lightly every day**
 - a. Watered heavily once each 7-10 days
 - b. Watered and fertilized heavily each week
 - c. Watered only after darkness
567. Both asphalt and concrete are used for hard surfacing driveways. Which of the following is true for asphalt?
- a. The thickness of an asphalt needed for a driveway is less than the thickness of concrete needed for a driveway.
 - b. Asphalt should be pitched to promote drainage
 - x. **Asphalt does not need a porous base material**
 - c. Asphalt is crowned to promote drainage
568. *Pinus halipensis* is very healthy growing in:
- a. Tropical zone
 - b. Subtropical zone
 - y. **All of the above zones**
 - c. None of the above zones
569. The design principle of total compatibility of all parts of an arrangement with each other is:
- a. Transition
 - b. Texture
 - c. **Harmony**
 - d. Proportion
570. For optimum vase life, most cut flowers should be stored at temperatures close to:
- e. **40 °F**
 - a. 45 °F
 - b. 30 °F
 - c. 50 °F
571. Which of the following statements is true.
- a. Perennials are used for one season.
 - f. **Perennials are good plants for the garden with low maintenance cost.**
 - b. Perennials are not easy to grow and establish in beds.
 - c. Perennials are only for foliage beauty.

- 572 Which of the following perennials is low and spreading type?
g. **Vinca**
a. Gaillardia
b. Cimicifuga
c. Coreopsis
- 573 Which of the following perennials has more varieties?
h. **Geranium**
a. Helenium
b. Verbena
c. Ghazania
- 574 Which of the following perennials is hardy and having blue and lavender colour flowers?
i. **Verbena**
a. Dianthus
b. Calendula
c. Alyssum
575. The major auxin produced in plants is:
a. Indole-3-butyric acid (IBA)
b. Naphthalene acetic acid (NAA)
j. **Indole-3-acetic acid (IAA)**
c. Ethylene
576. When cells are turgid, they are:
a. Deflated
b. Ruptured
c. Inflated
k. **Joined with other cells**
- 577 Which of the following statements is true?
a. Annual can survive in the sever winter without protection.
l. **Annuals usually bloom only once each season.**
b. Annuals are only planted in spring.
c. Annuals are only used for foliage beauty.
578. Which of the following statements is true?
a. Annuals are used as surface material.
b. Annuals are used as ground covers.
c. Annuals are used as border plants.
m. **Annuals are used all of above purposes.**
579. Which of the following statements is true?
a. Verbena is used for climbing purpose.
b. Verbena is used for border purpose.
c. Verbena is used for hedge purpose.
n. **Verbena is used for bedding purpose.**
- 580 Pansy is very popular annual due to its:
a. Stem and foliage beauty
b. Hardiness toward ground cover
c. Planting under shad.
o. **Mix colour flowers bedding plant.**
- 581 Which of the following annuals is planted as vine?
a. Salvia
p. **Ipomea**
b. Verbena
c. Marigold
- 582 Which of the following annuals is used as ground cover?
q. **Musemberanthemum**
a. Stock
b. Viola
c. Calendula

583. Which of the following annuals is used as rock garden?
a. Cosmos
b. Clarkia
c. Dianthus
r. **Morning glory**
584. Which of the following annuals is used as foliage beauty?
s. **Kochia**
a. Phlox
b. Partulaca
c. Antirrhinum
585. The average humidity percentage recommended for interior plants is:
a. 70 to 100%
t. **40 to 70%**
b. 20 to 30%
c. 10 to 20% 86.
586. The bract that encloses a flower cluster is a _____.
a. Quill
u. **Spathe**
b. Spike
c. Petal
587. Broad-leave evergreens such as *Ficus bengalensis* and *Alstonia schularis* should be fertilized in:
v. **Early spring**
a. Late fall
b. Late summer
c. Early summer
588. A major problem in standard carnation production resulting in asymmetrical flowers is:
a. Improper fertilization
b. High-density spacing
c. **Calyx splitting**
d. Lack of pinching
589. _____ is generally added to water when processing flowers in a retail floral shop.
a. Herbicide
b. Insecticide
w. **Biocide**
c. Algicide
590. The genus and species name for the ponytail palm is:
x. **Beaucarnea recurvata**
a. *Moluccella laevis*
b. *Brassaia actinophylla*
c. *Cordyline terminalis*
591. Training plants into three-dimensional ornamental forms, such as animals, is called:
y. **Topiary**
a. Espalier
b. Heading back
c. Bonsai
592. Clay soils require:
z. **A longer time for absorption of irrigation water than sandy soils**
a. A shorter time for absorption of irrigation water than sandy soils
b. About the same time for absorption of irrigation water as sandy soils
c. More or less time for absorption than sandy soils, depending on the pH of the clay
593. Plants that have been clipped or pruned into two-dimensional forms are:
a. **Espalier**
b. Topiary
c. Balanced
d. Dynamic

594. A transplanted tree or shrub should be set into the ground:
- 50 percent deeper than it was originally planted
 - So that the top roots are exposed to the air
 - With the top of the container slightly covered
 - At the same depth at which it was originally growing
595. The main commercial method for propagating African violets is by:
- Seeds
 - Crowns
 - Tubers
 - Leaf petioles
596. Damping-off is caused by:
- Fungi
 - Bacteria
 - Nematodes
 - Virus
597. Which of the following is a group of terms related to landscape design principles?
- Stratify, random, curvature
 - Focalization, proportion, simplicity
 - Hogarth, symmetrical, curvature
 - Thresh, rounding, complexity
598. Plants usually do not grow well in poorly drained soils because:
- Oxygen content is low in poorly drained soils
 - The organic matter content of poorly drained soils is too high
 - Poorly drained soils warm too quickly in spring
 - Plant roots become engorged with water in poorly drained soils
599. To make the living area of a landscape appear larger, a designer should include plants that feature:
- Warm-colored flowers such as reds, oranges, yellows
 - Cool-colored flowers such as blues, purples, lavenders
 - A combination of warm- and cool-colored flowers
 - All white flowers
600. Which of the following turf areas is mowed to the lowest height?
- Commercial lawn
 - Golf fairway
 - Home lawn
 - Golf green
601. In plants, _____ is the process of converting stored energy into energy for plant growth.
- Transpiration
 - Photosynthesis
 - Respiration
 - Pollination
602. A landscape designer uses many _____ in developing the preliminary design for a project.
- Perfect plans
 - Bubble diagrams
 - Site surveys
 - Problem statements
603. An example of an organic material is _____.
- Pea gravel
 - Perlite
 - Leaf mold
 - Vermiculite
604. The loss of water in the form of vapor from the surface of plant leaves is referred to as:
- Transpiration
 - Respiration
 - Oxidation
 - Condensation

605. The basic underlying principle of using a mist propagation system is that it:
- Keeps the propagation medium uniformly moist and supplies moisture to the base of the cuttings
 - Keeps the plant material cool
 - Cools the propagation medium to promote root formation and development
 - p. Increases humidity around the cutting and reduces transpiration**
606. Low-growing landscape plants should:
- q. Be placed in front of intermediate growing plants**
 - Be placed behind intermediate growing plants
 - Not be used in the landscape
 - Be planted under large trees
607. In a landscape design, properly located plants and structures.
- r. Can reduce heat intensity**
 - Need to be constantly pruned and maintained
 - Block the view of the front door
 - Are not essential for a good landscape design
608. A shade loving border plant is:
- Marigold
 - s. Impatiens**
 - Zinnia
 - Chrysanthemum
609. A plant that dies to the ground at the end of each growing season but comes back from the same root stubs year after year is most accurately described as:
- Perennial
 - Annual
 - Biennial
 - t. Herbaceous perennial**
610. Two basic types of pruning are heading-back and thinning-out. Which of the following is true about these pruning methods?
- Thinning cuts leave behind a good portion of the stem and many axillary buds.
 - u. Thinning cuts are made close to a main branch or ground and few axillary buds are left.**
 - Heading cuts usually remove entire branches and leave no buds.
 - Heading cuts remove a portion of the stem and only terminal buds are left.
611. Lowering the soil grade around a tree removes many of the tree's _____ roots.
- Tap
 - Aerial
 - v. Feeder**
 - Aquatic
612. Water availability, temperature extremes, and _____ should be considered when selecting trees for the landscape.
- Slope
 - Topography
 - w. Soil type**
 - Buildings present
613. Lawn sprinkler systems are installed so as to provide even coverage. It is accomplished by:
- x. Spacing the heads so that each sprinkler sprays to the next sprinkler**
 - Using sprinkler heads with a square pattern throughout the landscape
 - Spacing sprinklers based on needs specified in the soil test
 - Using one size pipe throughout the landscape
614. Callus is a term usually referring to:
- The tissue on the collar of a limb
 - y. The first tissue develops on a cut surface just before the root formation initiates.**
 - Deformed growth on plant limbs
 - A disease of plant leaves and limbs

615. A _____ is a woody perennial that has more than one main trunk.

- a. Tree
- b. Flower
- z. **Shrub**
- c. Weed

616. Mrs. Khan loves spring flowering bulbs. Which of the following would you suggest for Mrs. Khan to plant?

- a. ***Hyacinthus orientalis***
- b. *Coleus x hybridus*
- c. *Lonicera japonica*
- d. *Gardenia jasminoides*

617. In nursery production, a “liner” refers to _____.

- a. A plastic bag
- e. **A rooted cutting or small seedling**
- a. A type of garden tool
- b. A plastic mulch covering

618. Which of the following is a deciduous vine?

- f. ***Tecoma grandiflora***
- a. *Rosa marshalliana*
- b. English ivy
- c. Rosemary

619. Failure of a bulb to produce a marketable flower following floral initiation is:

- a. Disbudding
- g. **Flower blasting**
- b. Damping off
- c. Dieback

620. Which of the following is the proper recommendation for pruning trees at planting.

- h. **Pruning should be limited to shaping the plant by removing dead or damaged limbs**
- a. Trees should be cut back to at least one-half their size to prevent stress on root systems
- b. Trees should not be pruned until the third year after planting
- c. Trees should not be pruned at all – the latest trend is to let them develop naturally

621. The practice of manually watering a container plant until water comes out of the drainage holes of the container is effective for helping to reduce the buildup of _____ in the growing medium.

- a. Pathogens
- i. **Soluble salts**
- b. Pesticides
- c. Herbicides

622. One of the best ways to speed up the rooting process of cuttings is to:

- j. **Provide bottom heat**
- a. Keep the soil cool and the foliage warm
- b. Harden them off by laying them out to dry a few days before sticking
- c. Always take cuttings after mid-day

623. An area of the landscape that includes space for such items as a clothes line and garbage cans is the _____ area.

- k. **Service**
- a. Public
- b. Private
- c. Recreational

624. The landscape design principle of interconnection:

- a. Is a visual break in sequence
- b. Is the human perception of space and form related to human dimension
- c. Is the overall organization and structure of a design
- l. **Occurs when visual components are physically linked together**

625. A _____ flower is a type of flower often used as a focal point.

- a. Mass
- b. Line
- m. **Form**
- c. Spike-type

626. **Growing medium for greenhouse plant production is:**
n. A nutritive substance in which seeds germinate and plants grow
a. Unsterilized soil
b. Soil which hasn't been graded for size
c. The cellular structures that make up wood
627. **The phenomenon of terminal plant growth suppressing lateral growth is termed as:**
a. The apex auxin complex
o. Apical dominance
b. Lateral dominance
c. Terminal bud inhibition
628. **Some seeds are produced in the fall and remain on or in the ground until they germinate in the spring. Exposing seeds to the winter cold and moist soil is nature's method of _____.**
a. Scarifying
p. Stratifying
b. Acidifying
c. Sporulating
629. **The use of plant materials and landscaping techniques to conserve soil moisture and to reduce water usage is:**
q. Xeriscaping
a. Waterscaping
b. Natural landscaping
c. Bogscaping
630. **Which of the following describes plants that lose their leaves during the winter?**
a. Evergreen
r. Deciduous
b. Coniferous
c. Herbaceous
631. **Hardiness refers to:**
a. The strength of the wood of a tree
s. The quality of being strong and being able to survive in a certain region
b. The hardness of the soil in which a plant is being planted
c. The ability of a plant to grow indoors
632. **Hardening-off is a term used in the nursery/landscape industry to mean:**
a. Allowing herbaceous plants to become woody
b. Acclimatizing landscape plants to coldframe conditions
c. Coating plants with a protective plastic-type spray prior to transplanting
t. Acclimatizing tender plants to harsher, outdoor conditions
633. **The removal of lateral flower buds from stems, such as carnations and chrysanthemums, is called:**
a. Soft pinch
b. Deadheading
c. Hard pinch
u. Disbudding
634. **A lawn mower with blades parallel to the surface of the ground is called as:**
a. Reel mower
v. Rotary mower
b. De-thatching mower
c. Electric mower
635. **The turfgrass least tolerant of shade is:**
a. Zoysia grass
b. Fescue grass
c. St. Augustine grass
w. Bermudagrass

636. Which of the following is not an important environmental requirement for germination to occur?
- a. Proper temperature
 - b. Oxygen
 - x. **Carbon dioxide**
 - c. Moisture
637. Light energy, carbon dioxide, and water enter into the process of photosynthesis, through which:
- a. Respiration results
 - y. **Carbohydrates are formed**
 - b. Chlorophyll is formed
 - c. Amino acids are formed
638. The most common synthetic root-promoting chemicals are:
- b. IBA and AAN
 - c. CCA and ACD
 - d. ISO and OSB
 - z. **IBA and NAA**
639. What information is not mentioned in the legend on a final landscape plan?
- a. Plant names
 - b. Specific notes concerning installation
 - c. Plant quantities
 - d. **Designer's name**
640. When planting a bare-rooted tree, the tree should be planted:
- a. At 6 inches above the original soil level
 - b. At 2 inches above the original soil level
 - c. At 6 inches below the original soil level
 - e. **Directly even with the original soil level**
641. A major advantage for producing nursery stock in containers is that it:
- a. Is less expensive than growing in nursery fields
 - f. **Allows for transplanting any time during the growing season**
 - g. Requires less water and fertilization than field-grown **crops**
 - b. Requires less labor than field-grown crops
642. A method of fertilizer application is _____.
- a. Sterilization
 - b. Pasteurizing
 - h. **Side dressing**
 - c. Leaching
643. Brown patch, dollar spot, and gray snow mold are all diseases of:
- a. Azaleas
 - i. **Turfgrasses**
 - b. Trees
 - c. Evergreens
644. Which plant is a vine?
- a. *Ficus benjamina*
 - b. *Pinus thunbergiana*
 - c. *Ilex cornuta*
 - j. **Lonicera japonica**
645. Site features to consider when conducting a site survey include:
- a. Topography, client analysis, natural features, and climate
 - k. **Topography, soil conditions, natural features and existing vegetation**
 - b. Natural features, existing vegetation, soil conditions, and client analysis
 - c. Natural features, climate, existing vegetation, and client analysis
646. Food produced in the leaves moves to other parts of a plant through:
- l. **Phloem tissues**
 - a. Xylem tissues
 - b. Vein system
 - c. Arteries

647. When installing a landscape, which step (from the following list) should be completed last?
- m. **Plant the trees and shrubs**
 - a. Add amendments to the soil
 - b. Install the drainage system
 - c. Build retaining walls and garden walkways
648. Examples of cool season grasses include perennial ryegrass, bentgrass, and:
- a. Bermudagrass
 - n. **Fescue**
 - b. St. Augustine
 - c. Zoysia
649. Magnesium, calcium, and sulfur:
- o. **Are essential elements needed for plant processes**
 - a. Are micro-elements
 - b. Can be found in incomplete fertilizers
 - c. Are only needed by some plants
650. Functional roles of plants in the landscape do not include:
- a. Screening
 - b. Developing the structural framework of the design
 - c. Enclosing
 - d. Greening up
651. Which of the following is a major reason for mulching landscape plants?
- a. Increases anti-aerobic activity in the soil
 - b. Supplies nutrients
 - p. **Moderates soil temperature and conserves soil moisture**
 - c. Attracts earthworms
652. A plant that remains vegetative during its first season of growth and flowers in the second season is a (n):
- q. **Biennial**
 - a. Annual
 - b. Propagule
 - c. Perennial
653. Most landscape plants like the soil pH:
- r. **Slightly acidic**
 - a. Strongly acidic
 - b. Slightly alkaline
 - c. Strongly alkaline
654. When installing a landscape, which step (from the following list) should be completed first:
- a. Plant the trees and shrubs
 - b. Add amendments to the soil
 - s. **Install the drainage system**
 - c. Build retaining walls and garden walkways
655. Wisteria, clematis, and Japanese honeysuckle are examples of:
- a. Trees
 - t. **Vines**
 - b. Shrubs
 - c. Groundcovers
656. A flower container which is elevated on a base that may be short or long stemmed, is known as
- a. Vase
 - b. Bowl
 - u. **Pedestal**
 - c. Basket
657. Maximum interior plant deaths result from
- a. Incorrect PH
 - b. Too much light
 - v. Too much fertilizer
 - w. **Over watering**

658. In a residential landscape, the area between the house and the street is
- Family living area
 - Public area**
 - service area
 - private living area
659. A tool which is used for moving loose materials such as crushed stone. Peat moss etc, is landscape installation is known as:
- Ball cart
 - Hand trowel
 - Shovel
 - Scoop**
660. Stabilization of large trees or multi stemmed plants using wires and stakes of Hard wood or metal is known as:
- Guying**
 - Staking
 - All of the above
 - None of the above
661. The angle at which a branch meets the trunk of the tree or another larger branch, is
- Crotch**
 - Canopy
 - Lead branch
 - Water sprout
662. Limbs are pruned from trees with a technique called
- Thinning out
 - Heading back
 - Jump cutting**
 - Pinching
663. Claw like appendages occurring in pairs at the base of the leaf blade of turfgrasses is:
- Awn
 - Bract
 - Stipule
 - Auricle**
664. Combination of two or more cultivars of a single turf grass species is known as:
- Ball role
 - Blend**
 - Bench setting
 - Artificial turf
665. Dry, indehiscent, one seeded fruit with a thin pericarp fused to seed coat is known as:
- Achene
 - Pomes
 - Caryopsis**
 - None of these
666. Pollination and fertilization within closed florets is:
- Polygamy
 - Cleistogamy**
 - Allogamy
 - Autogamy
667. Stem of a grass plant is
- Stalk
 - Cane
 - Culm**
 - None of the above
668. In turf grasses, a pair of bracts usually present at the base of a spikelet is known as
- Glumes**
 - Auricles
 - Awns
 - None of the above

- 669 _____ is the axis of a spike or raceme
- a. Panicle
 - b. Peduncle
 - h. Rachis**
 - a. Thalamus
- 670 In turfgrasses, after mowing, a layer of above ground, green, living grass part is:
- a. Wear
 - i. Verdure**
 - b. Clipping
 - c. None of the above
- 671 Kentucky blue grass is a
- j. Cool season grass**
 - a. Warm season grass
 - b. A and B both
 - c. None of the above
- 672 Bahia grass is a
- a. Cool season grass
 - k. Warm season grass**
 - b. A and B both
 - c. None of the above
- 673 Best planting time of turf grasses is
- a. May-June
 - b. July-Aug**
 - c. Sep-Oct
 - d. Nov-Dec
- 674 Rose is a
- a. Short day plant
 - b. Long day plant
 - e. Day-neutral plant**
 - a. None of the above
675. When designing an asymmetrical floral arrangement, the floral designer must consider which of the following design principles:
- a. Proportion
 - b. Balance
 - c. Focal point
 - f. All of the above**
- 676- Elements of landscape design are:
- a. Balance & Emphasis
 - b. Rhythm & Harmony
 - c. All of the above
 - g. None of The above**
- 677- Principles of landscape design are:
- a. Colour & Form
 - b. Texture & Colour
 - c. All of the above
 - d. None of these**
- 678- Art of shaping plants into geometric shapes is known as:
- a. Ehabana
 - b. Bonseia
 - c. Topiary**
 - d. Pot pourri
- 679- First mowing of a newly established lawn is preferably done by:
- a. Sickle**
 - b. Mower
 - c. Scissor
 - d. None of these

- 680- _____ is a common example of monsoon annual grown in Pakistan :
- a. Dalia
 - b. Zinnia
 - e. **Cock's comb**
 - c. Pansy
- 681- Morning glory is:
- f. **Annual**
 - a. Perennial
 - b. Tree
 - c. Shrub
- 682- Candytuft is botanically called:
- a. *Helipterum roseum*
 - g. **Iberis amara**
 - b. *Bellis perenne*
 - c. *Tropaeolum inajus*
- 683- Chrysanthemum is a:
- h. **Short day plant**
 - a. Long day plant
 - b. Day-neutral plant
 - c. None of these
- 684- _____ is a best annual flower used for drying:
- a. Gaillardia
 - b. Nasturtium
 - i. **Helichryrum**
 - c. Balsam
- 685- Iris is a member of family:
- a. Violaceae
 - b. Liliaceae
 - j. **Iridaceae**
 - c. Compositae
- 686- Hybrid tea roses are developed by crossing:
- k. **Hybrid perpetual & Tea rose**
 - a. Floribunda & Tea rose
 - b. Tea rose & Polyantha rose
 - c. Tea rose & Grandiflora rose
- 687- Roses which flower only once during summer are:
- a. Floribunda roses
 - b. Climbing roses
 - l. **Ramblers**
 - c. Miniature roses
- 688- Iceberg bears _____ flowers:
- a. Yellow
 - b. Red
 - c. Pink
 - m. **White**
- 689- Kardinal belongs to:
- a. Floribunda
 - b. Miniature
 - n. **Hybrid tea**
 - c. Grandiflora
- 690- The emission of water vapor from the surface of plant leaves is called:
- a. Fixation
 - b. Photosynthesis
 - c. Nitrification
 - o. **Transpiration**

- 691 **Eranthemum is a:**
a. Tree
p. Shrub
b. Creeper
c. Annual
- 692 **A common example of fragrant shrub is:**
a. Chandni
b. Jatropha
c. Kaner
q. Murva
- 693- ***Nerium odorum* bears flowers of:**
a. White colour
b. Pink colour
c. Red colour
r. All of above
- 694- **Optimum day time temperature range for best growth of house plants is:**
a. 6-12
b. 12-18
s. 18-24
c. 24-30
- 695- **To properly water indoor plants, consider:**
a. The type of plant
b. The size of the plant
c. Where the plant is growing
t. All of the above
- 696- **Croton is a:**
a. Tree
b. Shrub
u. House plant
c. Annual
- 697- **Araucaria is a _____ plant:**
a. Tropical
b. Sub-tropical
v. Temperate
c. All of above
- 698 **A piece of broken pot which is used at the base of pot to help drainage is know as:**
a. Crown
b. Cristate
w. Crock
c. Bulbil
- 699- **Crocus is propagated through:**
a. Bulbs
x. Corms
b. Rhizomes
c. Seeds
- 700- **A leaf of fern or palm is**
a. Simple leaf
b. Pinna
y. Frond
c. Compound leaf
- 701 **Smooth and hairless plant surface is known as:**
b. Glaucous
z. Glabrous
c. Gloclind
d. None of these

- 702- Temporary removal of a plant from its pot in order to check the condition of the root ball, is known as:**
- a. Over potting
 - b. Repotting
 - c. Knocking out**
 - d. All of above
- 703- Milky sap which exudes from cut surfaces of a few house plants is:**
- a. Honey dew
 - e. Latex**
 - b. Glochid
 - c. Heel
- 704- A plant growth in a pot which is too small to allow proper plant growth is known as:**
- f. Pot-bound**
 - a. Potting on
 - b. Over- potting
 - c. Knocking out
- 705- Small bulb produced on the stem of a bulbous plants, is known as:**
- a. Bulblet
 - g. Bulbil**
 - b. A & B both
 - c. None of above
- 706- A small offset produced at the base of a corm, is:**
- a. Cormel
 - b. Cormlet
 - h. A & B both**
 - c. None of above
- 707 Narcissus has a cup- like centre in its flowers, known as:**
- a. Corolla
 - b. Cross
 - c. Crock
 - i. Corona**
- 708- A feathered petal which bears a distinct central band is:**
- j. Flamed**
 - a. Flaked
 - b. Floret
 - c. Filament
- 709- _____ is the tip of the bulb:**
- a. Node
 - b. Month
 - k. Nose**
 - c. Hirsute
- 710- The stalk of an inflorescence is known as:**
- a. Pedicel
 - l. Peduncle**
 - b. Perianth
 - c. Petiole
- 711- A whorl of leaves arising at the base of plants is:**
- a. Scales
 - b. Reflexed
 - m. Rosette**
 - c. None of these.
- 712- A fleshy spike in which small flowers are embedded, is:**
- a. Spathe
 - n. Spadix**
 - b. Spike
 - c. Pedunel

- 713- _____ is a common shrub which is used as hedge in Pakistan:
- o. Duranta**
 - a. Motia
 - b. Chandna
 - c. All of the above
- 714- A flower- head or tightly packed inflorescence, is
- a. Trumpet
 - b. Tepal
 - p. Truss**
 - c. Tunic
- 715- A dry and often papery covering of corms & some bulbs, is known as:
- a. Trumpet
 - b. Plunging
 - c. Fall
 - q. Tunic**
- 716- An instrument that measures the electrical conductivity of a soil solution is called a:
- a. Manometer
 - b. Tensiometer
 - c. Photometer
 - r. Solubridge**
- 717- Rose is severely pruned during:
- a. Spring (Feb- Mar)
 - b. Autumn (Sep- Oct)
 - s. Winter (Dec- Jan)**
 - c. Summer (May- June)
- 718- Rose hips are rich source of:
- a. Vitamin A
 - b. Vitamin B
 - t. Vitamin C**
 - c. All of the above
- 719- Balled and Bur lapped evergreens may be moved at any time of year except when
- u. New shoots are growing**
 - a. They are dormant
 - b. The soil is frozen
 - c. The soil is too wet
- 720- Which of the following are not annual plants?
- v. Asparagus**
 - a. Petunia
 - b. Margold
 - c. Geranium
- 721- Which of the following annuals are best used for edging
- a. Poppy
 - b. Stock
 - w. Sweet alyssum**
 - c. Sun flower
- 722- Which of the following are good choices as specimen plants in a landscape:
- a. Magnolia
 - b. Alstonia
 - x. Gold mohr**
 - c. Bougainvillea
- 723- The most common mistake in mowing cool season grasses is to
- y. Mow them too short**
 - a. Mow too often
 - b. Use a dull mower blade
 - c. d. Mow them too high

- 724 The name of the person who developed the binomial system for naming plants is
z. **Linneus**
a. Socrates
b. Plato
c. Hortus
- 725 When used to describe a plant, the word deciduous means that
a. The plant is perennial
b. **The plant sheds its leaves each year**
c. The plant is a shrub
d. All of the above
- 726 Flowers which are grown from bulbs include
a. Zinnia
b. **Tulip**
c. Marigolds
d. All of the above
- 727 Xeriscaping is a landscaping process which requires:
a. No water in the landscape
b. Draining water from landscape area
e. **Water conserving**
c. Arid landscaping
- 728 Mulching can reduce water loss by:
a. 50%
f. **90%**
b. 35%
c. 25%
- 729 _____ can be effectively used as windbreak:
g. **Moulsary**
a. Ulta Ashok
b. Bottle brush
c. All of the above
- 730 Sprigging is:
a. Cutting grass to kept it short
b. Sowing a lawn
c. Chopping up a lawn to provide better drainage
h. **Planting individual plants, runners, or stolons to establish a lawn**
- 731 Grass seed should be carefully covered with soil to a depth of
a. 0.5 cm
i. **1 cm**
b. 1.5 cm
c. 2.5 cm
- 732 The best way to control weeds from lawn is to develop:
j. **A good healthy thick turf**
a. A combination of pre emergence and post mergence weed killer
b. A weed killer/fertilizer
c. None of the above
- 733 Rolling the lawn each year may be necessary to
a. Level the lawn
b. Push grass roots into close contact with soil
c. Provide a firm surface for mowing
k. **All of the above**
- 734 The common name for diffenbachia is
a. Umbrella tree
b. Bougainvillea
c. Snake plant
l. **Dumb cane**

- 735 **The genus name for croton**
a. Sansservieria
b. Ficus
m. Codiaeium
c. Araucaria
- 736 **When indoor plants are over watered:**
a. They drop their leaves
b. They die
n. Their leaves turn yellow
c. All of the above
- 737 **The night temperature of indoor plants should be _____°F cooler than day time temperature**
a. 5-10
b. 3-4
c. 20-30
o. 10-15
- 738 **Charcoal is used in a terrarium for its**
a. Color
b. Drainage material
c. Drainage ability
p. None of the above
- 739 **The use of high nitrogen fertilizers in terrarium soil results in the release of**
a. Moisture
q. Ammonia gas
b. New plants
c. None of the above
- 740 **Plants tend to grow towards light sources. It is known as**
a. Photosynthesis
b. The rain cycle
c. Transpiration
r. Phototropism
- 741 **Moisture is lost through small openings on the underside of the leaves known as:**
a. Air holes
b. Stems
s. Stomata
c. None of the above
- 742 **The larger, center most of the plants used in bonsai is cut off:**
a. To dwarf the plant
t. To cause root branching
b. To make root system shallow
c. To simplify root pruning job
743. **Site of attraction that holds attention of viewer in a landscape is called;**
a. Balance
b. Proportion
u. Focal point
c. Rythum
744. **Most famous fragrant plant in summer is;**
v. Jasminum sambac
a. *Althcea rosea*
b. *Tabernamontana divertica*
c. *All of the above*
745. ***Lilium longiflorum*, an important holiday potted plant, is commonly known as:**
a. Kalanchoe
b. Poinsettia
w. Easter Lily
c. Hydrangea

746. **Pansy is very popular winter annual for its**
a. Stem and foliage beauty
b. Planting under shade
c. Hardiness towards ground cover
x. Mixed coloured flower bedding plant
- 747 **Use of a pipe covered by a rope for providing support to some indoor plants like Scindapsus, is termed as:**
a. Terrarium
y. Totem
b. Topiary
c. None of the above
- 748 **An open frame work, designed to offer shady resting place is called;**
a. Cold frame
z. Arbor
b. Pergola
c. Deck
- 749 **A line of demarcation that creates visual interest in a landscape by separating one segment from another is called**
a. Edging
b. Border
c. Fencing
d. Line
- 750 **In landscape shape of tree is called**
a. Shape
e. Form
b. Structure
c. Texture
- 751 **Water gardening is also called,**
f. Equascape
a. Hardscape
b. Nightscape
c. Alpine gardening
752. **Landscape, in which rocks and grasses are used instead of flowers is called**
a. Rock gardening
g. Japanese gardening
b. Water gardening
c. None of the above
753. **Which of the statement is true?**
a. Verbena is used as climber
b. Verbena is used for border
c. Verbena is used as hedge plant
d. Verbena is used as bedding plant
754. **Which of the plant is used for is foliage beauty?**
h. Kochia
a. Phlox
b. Partulaca
c. Antirrhinum
755. **Which annual flower is used ground cover?**
a. Viola
b. Stock
c. Calendula
i. Musemberanthemum
756. **Which of the statement is true?**
a. Lawns should always be mowed in the same direction
b. Plants are best wintered without water in them
c. Cylinder mowers give thorough mowing because of air vacuum system
d. Warm season grasses usually respond better to close mowing.

757. An example of a specialty cut flower used in a floral arrangement is a(n):

- a. Rose
- b. Carnation
- j. Orchid**
- c. Pompom Chrysanthemum

758. Which of the following plant require very light pruning?

- k. Nerium Odorum**
- a. Rhododendron
- b. *Lawsonia alba*
- c. *Punica grantum*

759. Which tree bears fragrant flowers?

- a. *Albezia lebbeck*
- b. *Pinus roxburghii*
- c. *Papulus elegni*
- l. None of the above**

760. Which following creeper bears white flowers?

- a. Ipomea
- m. Plumbago**
- b. Clerodendron
- c. Tecoma

761. *Pinus roxburghii* is very healthy growing in;

- a. Tropical zone
- b. Subtropical zone
- c. All of the above zones
- n. None of the above zones**

762. Low-lying plant that covers some area in the landscape is called;

- a. Shrub
- o. Ground cover**
- b. Bedding plant
- c. Perennial

763. Plants which shed there leaves in autumn are called;

- a. Evergreen
- b. Annuals
- p. Deciduous**
- c. Biennials

764. _____ is a common disease found on roses grown for cut flowers.

- a. Stem rot
- b. Rust
- c. Root rot
- q. Botrytis**

765. Plants for the marginal areas of pond are called

- r. Bog plants**
- a. Emergent
- b. Aquatic plants
- c. floaters

766. Type of contained water feature is

- a. Fountain
- b. Water fall
- s. Pond**
- c. None of the above

767. _____ is used for daily movement in the landscape

- t. Functional path**
- a. Temporary path
- b. Occasional path
- c. Decorative path

768. when all the parts of the design suggest a single impression it is called
- a. Harmony
 - b. Transition
 - c. Balance
 - u. Unity**
769. In Punjab pruning of roses is managed during
- a. Summer
 - v. Winter**
 - b. Spring
 - c. Year around
770. Which of the following roses bear clustered flowers?
- a. Hybrid tea
 - b. Floribunda
 - c. Miniature
 - w. All of the above**
771. The new growth of a *Dieffenbachia* is weak and spindly, with large gaps between the leaves. The problem is probably:
- a. Salt damage
 - b. Nitrogen deficiency
 - c. Botrytis
 - x. Lack of light**
772. Cuttings of potted chrysanthemums are planted at an angle to encourage:
- y. Increased branching**
 - a. Larger blooms
 - b. A more rounded plant
 - c. Earlier flowering
773. The common name for *Zebrina pendula* is:
- a. African Lily
 - b. Boston ivy
 - z. Wandering Jew**
 - c. Grape ivy
774. Which of the following flower types is not suitable for pressing?
- a. Daffodil**
 - b. Dusty miller
 - c. Pansy
 - d. African violet
775. The most important environmental factor regulating flower initiation in bulbous species is:
- a. Light
 - e. Temperature**
 - b. Moisture
 - c. Ventilation
776. Plant propagation is important because of the reason:
- f. Selected plants chosen to maintain their traits**
 - a. Usefulness
 - b. For specific traits
 - c. Preserving plant products as a source of food
777. Successful Plant Propagation involves the:
- a. Knowledge of technical skills
 - b. Knowledge of plant biology
 - c. Knowledge of plant
 - g. All of these**
778. Any detached plant part which, when placed under favorable conditions will produce a new plant identical to the parent plant is called a:
- h. Cutting**
 - a. Seed
 - b. Plug
 - c. Graft

779. Which type of cutting is taken in the dormant season when tissues are fully matured and lignified.
- a. Softwood
 - b. Semi-hardwood
 - i. Hardwood**
 - c. Herbaceous
780. Colchicine is chemically:
- a. Volatile oil
 - b. Tannins
 - c. Protein
 - j. Alkaloid**
781. Quinine alkaloids are present in
- a. Nux vomica
 - b. Cocoa leaves
 - c. Belladonna roots
 - k. Cinchona bark**
782. This mineral is exposed to high heat and expanded. It is often used as a propagation media.
- a. Perlite
 - l. Vermiculite**
 - b. Peat Moss
 - c. Sand
783. What are two of the most important qualities for selecting a rooting media?
- a. Hard and free from pests
 - b. Well drained and low moisture retentive
 - m. Water holding capacity and Air holding capacity**
 - c. None of these
784. Which of these four plants which are propagated from herbaceous cuttings.
- n. Carnation, Chrysanthemum, Coleus and Geranium.**
 - a. Azalea, Coleus, Geranium and Rose
 - b. Coleus, Ruscus, Gardenia and holly
 - c. Tuberose, Syngonium, Hibiscus and Dracenia
785. Why is it important to select cutting free of berries and flowers?
- a. The flowers and berries take up too much space in the propagation bed.
 - b. Because berries and flowers weigh down the cuttings and may cause them to tip over.
 - c. The flowers and berries would attract harmful insects to the cuttings.
 - o. Because they consume much of the food stored and produced by the cutting.**
786. Why is it important to transport cutting from the field to the propagation area in a plastic bag?
- a. To keep your hands and clothing clean.
 - p. To help maintain the moisture level of the cutting stock.**
 - b. Because a paper bag would tear too easily
 - c. To maintain the integrity of the soil around the roots.
787. What is the optimum length for most of cuttings?
- a. 1 to 3 inches
 - b. 3 to 6 inches
 - q. 6 to 8 inches**
 - c. 10 to 12 inches
788. The bottom leaves from the cutting should be removed before "sticking" the cutting for which of the following reasons.
- a. The leaves may rot
 - b. The leaves may become diseased
 - c. Neither A nor B
 - r. Both A and B**

789. When taking the cutting from the stock plant, at what angle should the cut be made?
- a. 25-degrees
 - s. 45-degrees**
 - b. 60-degrees
 - c. 90-degrees
790. When sticking a hard wood cutting, how many nodes should be under the rooting medium?
- t. At least 1**
 - a. 1 to 3
 - b. 2 to 4
 - c. 3 to 5
791. Why are rooting hormones applied to cuttings?
- a. To increase the plant's ability to reproduce.
 - u. To promote the production of a new root system.**
 - b. To help the cutting resist disease.
 - c. To promote the production of healthy leaves, flowers and berries.
792. Why must a hole or furrow be made in the growing media before sticking the cutting?
- a. To prevent the rooting hormone from getting knocked off the end of the cutting.**
 - b. To make the process of sticking the cutting easier.
 - c. To establish the depth to which the cutting should be planted.
 - d. To maintain good air circulation around the cutting's base.
793. How many seconds should a cutting be held in a liquid IBA rooting hormone?
- a. 2
 - v. 5**
 - b. 10
 - c. 12
794. How far should cuttings be inserted into the rooting media?
- a. ½ to 3 inch
 - b. ¾ to 2 inch
 - w. 1 to 2 inch**
 - c. 1 ½ to 3 inch
795. It is important to firm the soil around the base of the cutting due to following reasons:
- a. To eliminate air pockets.
 - b. To make sure the base of the cutting makes good contact with the rooting media.
 - c. Neither A nor B
 - x. Both A and B**
796. Why is it important to evenly space the cuttings in the rooting medium?
- a. To promote good air circulation.
 - b. To cut down on the transmission of disease organisms.
 - y. To make the best use of the propagation space.**
 - c. All of the above.
797. What portion of the stem of a cutting should be coated with rooting hormone?
- a. A portion which includes at least two nodes.
 - b. The bottom ¼ inch.
 - z. The portion of the stem that will be under the media.**
 - c. The entire cutting should be covered with hormone.
798. What is the final step of preparing cuttings?
- a. Preparing the rooting media.
 - b. Selecting quality cutting stock.
 - c. The application of rooting hormone.
 - d. Watering-in and placing the cuttings on a mist bed.**
799. Why must any left over rooting hormone be discarded after use?
- e. To eliminate the possibility of contaminating the entire supply of rooting**
 - a. hormone.
 - b. To conserve funds used to purchase rooting hormone.
 - c. To deplete the supply of rooting hormone to help keep the supplier in business.
 - d. To assist the propagator in keeping the area neat and free of debris.

800. Why a propagator trim the leaves of large-leaved cuttings?

- a. To eliminate unsightly insect damage.
- f. To conserve propagation space.**
- b. To shape the leaves into topiaries.
- c. To achieve a uniform leaf size and shape.

801. What type of cutting does not become woody?

- a. Softwood
- b. Semi-hardwood
- c. Hardwood
- g. Herbaceous**

802. Sodium hypochlorite is used:

- a. To eliminate unsightly insect damage.
- b. To conserve moisture.
- c. To enhance the rooting.
- h. To sterilize cutting tools.**

803. Secondary dormancy is due to:

- a. Immature Embryo
- b. Chemical Inhibitors
- i. Light Requirement**
- c. Hardseededness

804. Cutting most oftenly used in fruit plants are:

- a. Herbaceous Cutting
- b. Leafy cutting
- c. Semi hard wood cutting**
- d. None

805. Which of the following fertilizer carries 46% nitrogen

- a. Urea**
- b. Ammonium sulphate
- c. Potassium nitrate
- d. Single super phosphate

806. Red top is the variety of

- a. Tomato**
- b. Potato
- c. Apple
- d. Guava

807. Alternate bearing in mangoes is due to

- a. Environmental factor
- b. Physiological factors
- c. Genetic factors
- j. All of these**

808. Windproof shelterbelts are

- k. Very dense**
- a. Medium dense
- b. Porous
- c. None of these

809. Plants control direct sunlight and intercept glare by means of

- l. Obstruction**
- a. Absorption
- b. Reflection
- c. Radiation

810. Roses can successfully be cultivated at a temperature

- a. 40°C
- m. 21°C**
- b. 30°C
- c. 10°C

811. Tulip is an example of
- a. Rhizome
 - n. Bulb**
 - b. Tuber
 - c. Corm
812. Ground cover includes of plants
- a. Annuals
 - b. Biennial
 - c. Perennials
 - o. All of these**
813. Which of these shrub produce fragrant flowers
- a. Cestrum nocturnum
 - b. Cestrum diurnum
 - c. Murraya paniculata
 - p. All of these**
814. The danger signs of too little water are
- a. Leaves rapidly become wilted and limp.
 - b. Leaf growth slows.
 - c. Lower leaves become curled or yellow in colour.
 - q. All of these**
815. For potting plants the pH should be _____
- r. 5-6**
 - a. 6-7
 - b. 4-5
 - c. None of these
816. Double delight is a variety of rose which belongs to a group of :
- s. Hybrid Tea**
 - a. Floribunda
 - b. Miniature
 - c. None of these
817. Chrysanthemums are propagated through
- a. Seeds
 - b. Suckers
 - c. Cutting
 - t. All of these**
818. Which of the following annual is used in rock gardening?
- u. Cosmos**
 - a. Clarkia
 - b. Dianthus
 - c. Morning glory
819. Which of the following annual is used as ground cover?
- v. Muehlenbergia**
 - a. Stock
 - b. Viola
 - c. Calendula
820. Which of these annual is long season bloom
- w. Statice**
 - a. Sweet peas
 - b. Portulaca
 - c. All of these
821. Which of these are temporary visitor in the garden plantation.
- a. Perennials
 - b. Shrubs
 - x. Annuals**
 - c. Succulents

822. During the summer, day time temperature in the forest are commonly cooler than open areas
- a. 2°C
 - y. 10°C**
 - b. 15°C
 - c. None of these
823. Where the physiotherapy in floriculture can be exercised?
- a. Old houses
 - b. Jails
 - z. Hospitals**
 - c. All of these
824. Lotus is famous for
- a. Home gardening
 - b. Rock gardening
 - c. Water gardening**
 - d. None of these
825. For foundation plantings, plants should be
- a. Deciduous
 - e. Annual**
 - b. Evergreen
 - c. Ground covers
826. Which of these create overall effect of various features, styles and colour schemes of the total scene.
- f. Harmony**
 - g. Proportion**
 - a. Contrast
 - b. Accent
827. When regarding chromosome number
- h. chromosome number will vary within a species
 - i. the same species will have always the same number of chromosomes**
 - j. every species has a different number of chromosomes
 - k. Chromosome number will vary within cultivars
828. Which of the following are characteristics of prophase?
- l. crossing over occurs
 - m. A well defined nucleus bounded by a nuclear envelope
 - n. Nucleoli disappear**
 - o. Spindle formation
829. Fusion of protoplasts is done by
- p. Polyethylene glycol**
 - q. Glycerol
 - r. Ascorbic acid
 - s. Agar
830. A clone is a colony of
- t. Cells having different shapes
 - u. Cells having similar shape
 - v. Cells having similar genetic constitution**
 - w. Cells having similar size
831. The longest phase in mitotic division is
- x. Prophase
 - y. Interphase**
 - z. Metaphase
 - a. Telophase
832. The seedless watermelon, *Citrullus lanatus*, that is commonly used all over the world, is: Tetraploid
- a. Triploid**
 - b. Diploid
 - c. Pentaploid

833. Mango trees bear which type of flowers?

Staminate

Hermaphrodite

Pistillate

Both of above

834. The cultivated tomato originated from wild forms in which region

Africa

South America

South Asia

America

835. Polyembryony in citrus is obstacle in cultivar improvement but rootstock propagation

True

False

Both of above

None of above

836. The species which produce seed from vegetative cells and not through sexual means are called

Hybrid

Apomictic

Zygotic

Inbred

837. Cucurbitaceae family has which type of plants on the basis of sex of flowers

Hermaphrodite

Dioecious

Monoecious

None of above

838. Who is the breeder of famous Kinnow mandarin?

H.B. Frost

J.W. Grosser

R.K. Soost

F.G. Gmitter

839. Mango varieties grown in Pakistan generally produce seed

Monoembryonic

Polyembryonic

Both of above

None of above

840. The Kinnow hybrid, bred in USA, has parents

King and sour orange

Kara and wilking

King and willow leaf

Willow leaf and sour orange

841. Increased genetic diversity following extended time in a tissue culture is a problem called

Gene alteration

Somaclonal variation

culture shock

Epigenetic variation

842. A mass of dividing, undifferentiated cells in a tissue culture is called

a callus

an embryoid

a plasmodium

protoplasm

843. Electroporation is a technique used with

Calluses

Protoplasts

Cell suspensions

Embryoids

844. To produce plants that are homozygous for all traits, the best choice is
callus culture
anther / pollen culture
protoplast culture
Embryo culture

845. Cell suspension cultures require
Organogenesis
Differentiation
Disaggregation
Dedifferentiation

846. If you want to use a plant tissue culture as a chemical factory for vitamins, choose
suspension cultures
anther pollen cultures
protoplast cultures
None of above

847. The fastest way to a ripe tomato using tissue culture is by
anther / pollen culture
plant organ culture
callus culture
None of above

848. For aseptic cultures in tissue culture, which equipment is not necessary?
pH meter
Laminar hood cabinet
Autoclave
All of above

849. Flower opening is termed as
Emasculation
Anthesis
Dehiscence
Fecundation

850. The four main parts of a flower are
Pollen, ovary, pistil and stamen
Sepal, pistil, ovary and stigma
Sepal, petal, stamen and pistil
All of above

851. Pollination is a sexual process in which pollen is deposited on the stigma of the plant. It starts the process of fertilization and ---
growth of pollen tube
seed formation
production of a fruit or seed coat
All of above

852. Watermelon is a crop with floral biology
monoecious & cross-pollinated
dioecious & cross-pollinated
dioecious & self-pollinated
None of above

853. A plant composed of two or more genetically different tissues is called
Sport
Chimera
Mutation
Hybrid

854. Citrange citrus is the intergeneric hybrid, with its parents?
Poncirus and sweet orange
Poncirus and mandarins
Sweet orange and mandarins
Mandarins and sweet orange

855. Megasporogenesis is the formation of which gametes?

Male

Female

Both of above

None of above

856. A thin, delicate, cellulose inner layer in a pollen grain wall is known as

Intine

Exine

Colpi

All of above

857. A plant useful in the study of plant genomes because of its small genome size is

Tulip spp.

Arabidopsis thaliana

Pisum sativum

Tobacco

858. Most plant tissue cultures are initiated from

calluses

explants

embryoids

Cell suspension

859. Pores in protoplasts may be opened to DNA by the application of

Magnetism

Enzymes

Electricity

None of above

860. Which of the following are mismatched?

Protoplast isolation-hybrids

Homozygous plants-anther/pollen culture

Callus culture-differentiated tissues regenerate

All of above

861. Plant transformation is

When a plant grown in culture generates increased genetic variation

When plant cells in suspension cultures form individual embryos that can grow into plants

The incorporation of foreign DNA into the plant genome

Both a and b

862. Unlike the somatic cells of animals, plant cells can be grown in tissue culture and regenerate new plants

Because each cell contains the entire genome

Because plant cells can dedifferentiate and revert back to seeds

Because plant cells are able to express genes that weren't previously expressed

None of above

863. Phenolic compounds, a cause of medium browning, are mostly released by which plants

Succulents

Woody

Herbaceous

All of above

864. What is the structural nature of enzymes?

Fat

Protein

Carbohydrates

Starch

865. The male sterile plants due to cytoplasmic genes are termed as

Cytoplasmic

Genetic

Gametic

None of above

866. Hyperhydric malformation occurring during *in vitro* propagation is termed

Contamination

Vitrification

Browning

All of above

867. The use of living organism or their by-products to modify human health and environment is

Tissue culture

Biotechnology

Genetic engineering

Recombinant DNA

868. The ability of somatic cells to grow into a complete plant is termed as

Somatic embryogenesis

Totipotency

Regeneration

All of above

869. Somatic variation is occurred in which cells

Germ cells

Somatic cells

Both of above

None of above

870. Incompatibility, a problem in plants hybridization programs, can be over come by

Somatic hybridization

Endosperm culture

Embryo culture

All of above

871. The process of formation of two or more embryos in the seed is known as

Apomixis

Polyploidy

Polyembryony

All of above

872. The $2n$ number of chromosome in citrus is

15

18

21

24

873. Which is not the method to check pollen viability in the laboratory?

Staining

In vitro culture

Fruit set

None of above

874. The one reason of unfruitfulness in fruits may be

Heterostyly

Compatibility

Monoecy

None of above

875. Polyembryony reflects the number of embryos per seed

One or more

Two or more

Both of above

None of above

876. Which of the following is involved in seedless watermelon production?

Apomixis

Interspecific crosses

Tetraploidy

All of above

877. The quickest way to produce homozygous breeding lines from heterozygous parents is through

Doubled haploids

Aneuploidy

Protoplast fusion

Allopolyploidy

878. Which of the following is an example of an active meristematic tissue in plants?

Sclerenchyma

Cambium

Epidermis

Cuticle

879. Which of the following describes an appropriate technique for commercially propagating chimeras?

Crossing the chimera with a normal plant of the same variety

Stimulating haploid female germ cells taken from the chimera to divide without being fertilized

Taking stem cuttings from the chimera and its descendents

All of above

880. Which of the following accurately describes the role of restriction enzymes in genetic engineering?

Cutting sequences of double-strand DNA into fragments

Making multiple copies of gene sequences of single-strand DNA

Removing the nucleus of a cell and replacing it with another

None of above

881. Mendel's principle of independent assortment is best explained by the arrangement of chromosomes in

Telophase of mitosis

Metaphase of meiosis

Prophase of mitosis

All of above

882. A variant among clones is known as

Variety

Strain

Clone

None of above

883. A cell without cell wall is called

Protoplasm

Protoplast

Plasma

Cytoplasm

884. A medium without addition of agar is called

Solid medium

Liquid medium

Cell suspension culture

Both b and c

885. Fusion of nucleus of one plant cell with cytoplasm of the other cell is called

Heterokaryon

Homokaryon

Cybrid

None of above

886. Distilled water after autoclaving is known as

Deionized water

Double distilled water

Autoclaved water

All of above

887. The genetic constitution of an organism is termed as

- Gene
- Allele
- Genotype**
- Phenotype

888. A small circular molecule of double stranded DNA naturally occur in bacteria and yeast is called

- Ti-plasmid
- Plasmid**
- Plastid
- All of above

889. The temperature of the autoclave for the sterilization of culture medium is

- 115°C
- 119°C
- 121°C**
- 125°C

890. Which concentration of ethanol is generally applied for asepsis of explants?

- 90%
- 80%
- 70%**
- 55%

891. Which plant part is taken for isolation of protoplast in somatic hybridization?

- Shoot
- Leaves
- Both of above**
- None of above

892. The regeneration of organs or organ-like structure or (pro) embryo from callus is termed as

- De-differentiation
- Re-differentiation**
- Differentiation
- All of above

893. Which group of plant hormones induces among other things, cell elongation and cell division?

- Cytokinin**
- Auxin
- Gibberellin
- All of above

894. A cell with two or more identical nuclei as a result of protoplast fusion is known as

- Heterokaryon
- Homokaryon**
- Both of above
- None of above

895. Haberlandt was the first who made attempts for cell cultures in the year

- 1907
- 1909
- 1902**
- 1904

896. All of the following are examples of evolution, except:

- Mutations in an individual
- Changes in an allele frequency in a species
- Adaptive Radiation**

897. DNA replication occurs in which phase?

- Interphase
- Prophase
- Anaphase**
- Telophase

898. When the ratio of auxin to cytokinin in tissue culture is low

Rooting can be induced in an explant

Shooting can be induced in callus

Cell division is promoted in explants to produce callus

All of above

899. Mendel's discovery that characteristics are inherited due to the transmission of hereditary factors resulted from his

Careful microscopic examinations of genes and chromosomes

Breeding experiments with many generations of fruit flies

Analysis of the offspring produced from many pea plant crosses

None of above

900. A condition in which pollen is absent or non-functional in flowering plants is called

Incompatibility

Sterility

Male sterility

Compatibility

901. Plants containing only single sex flower is called

Dioecious

Monoecious

Hermaphrodite

All of above

902. Transfer of pollen grains from anther to stigma is called

Pollination

Fertilization

Cloning

All of above

903. Mendel did a lot of work on pea plant due to easy crossing for

Fertilization

Hybridization

Pollination

Emasculation

904. The science dealing with the structure, function and life of the cell is called

Zoology

Cytology

Botany

Taxonomy

905. Heritability is expressed in which unit

Gram

Percentage

Meter

None of above

906. pH of the medium can be increased by the addition of which solution

1N HCl

1N NaOH

1N H₂SO₄

All of above

907. Autoclave is used for sterilization and conversion of sugar into

Fructose

Glucose

Sucrose

All of above

908. Browning, a common problem in *in vitro*, can be controlled by adding

2,4-D

Charcoal

Tap water

Kinetin

909. The process of callus formation in plant tissue culture is termed as

Embryogenesis

Callogenesis

Organogenesis

All of above

910. Undifferentiated mass of cells in *in vitro* cultures is known as

Wound

Callus

Cambium

Meristem

911. Which is a breeding method used by humans to produce new and improved varieties of plants?

Independent assortment

Artificial selection

Natural selection

All of above

912. Micropropagation may be described as

Growing plants in pots

Growing whole plants from very small piece of a parent plant

Growing plants in greenhouses

All of above

913. *In vitro* is a means of growing organisms

Inside other living organisms

Outside

In glass

In plastic pot

914. Somatic cells are

Sex cells

Non sex cells

All body cells

All of above

915. Tissue culturing is sometime described as

DNA fingerprinting

A technique where individual cells are grown and divide in a bath of sterile nutrient fluid containing all required ingredients

A process where organisms reproduce asexually

None of above

916. Rooting in the plant tissue culture medium will be induced by

Auxins

Cytokinins

Gibberelins

BA

917. Which is not haploid among the following?

Sperm cells

Gametophytic tissue

Nucellar tissue

All of above

918. Inheritance of acquired characters is also known as

Darwinism

Lamarckism

Epigenesis

None of above

919. The Chromosome theory of heredity was proposed in 1902 by

Sutton & Boveri

Mendel

Cameraris

Haberlandt

920. In non-allelic interaction the dominating gene is called

Dominant gene

Epistatic gene

Hypostatic gene

All of above

921. How many different kinds of amino acids are?

20

22

24

26

922. When a nitrogen base is bonded to a sugar, this complex is known as

Nucleoside

Nucleotide

Nucleic acid

All of above

923. The two main steps of artificial hybridization are

Emasculation & pollination

Pollination & fertilization

Both of above

None of above

924. The characterization of the chromosomal complement of an individual or a species, including number, form, and size of the chromosomes is termed as

Ideogram

Ideotype

Karyotype

None of above

925. The change in chromosome that is an exact multiple of basic set of chromosome is termed as

a. Euploid

b. Aneuploid

c. Haploid

d. Autopolyploid

926. The petals in a flower are collectively called

a. Calyx

b. Anther

e. Corolla

c. Perianth

927. In Pakistan the postharvest losses of fruits and vegetables ranges between;

a. 10-15%

b. 15-20%

c. 20-30%

f. 20-40%

928. Quality of fruits and vegetables for fresh consumption is determined by;

a. Grower

b. Retailer

c. Wholesaler

g. Consumer

929. Vegetables or their products are preserved by means of:

a. Grading

b. Packing

h. Processing

c. Vegetable forcing

930. A physical aging activity in which plant tissue degenerates and ultimately dies is called.

a. Fruit ripening

b. Maturity

i. Senescence

c. a & b

931 Degeneration and death of aerial plant parts like leaves, branches, flowers and fruit but not underground plant parts is called;

- a. Senescence
- j. Partial senescence**
- b. Maturity
- c. None

932 Synthetic products which when applied to plants, produce reactions almost identical to hormones, are called

- a. Plant hormones
- k. Plant growth regulators**
- b. Photoperiodism activator
- c. Plant growth promoters

933 Ethylene has horticultural uses such as;

- a. Inducing fruit maturity
- b. Initiate flowering
- c. Changing the green colour of fruits

l. All of above

934 Low temperature injury includes;

- m. Chilling injury**
- a. Desiccation heaving
- b. Anthracnose
- c. Above all

935 Carotene is a precursor of ;

- a. Vitamin-C
- b. Vitamin-D
- n. Vitamin-A**
- c. Ascorbic acid

936 A form of controlled atmosphere storage in which the produce is stored in a partial vacuum is called;

- o. Hypo baric storage**
- a. Gas storage
- b. Modified storage
- c. Controlled atmospheric storage

937 Total soluble solids in fruits or vegetables are measured by;

- a. Spectrophotometer
- b. Hydrometer
- p. Refractrometer**
- c. Tensiometer

938 Acidity is readily determined from a sample of extracted juice by titration with normal alkaline solution;

- q. 0.1 N NaoH**
- a. 1.0 N NaoH
- b. 10.0 N NaoH
- c. 0.01 N NaoH

939 The best time of harvest for perishable fruits and vegetables is ;

- a. Morning
- b. Afternoon
- r. Evening**
- c. Night

940 In mangoes the established method for evaluation of maturity is;

- a. Colour of fruit
- b. Firmness of fruit
- s. Dry matter contents**
- c. Size of fruit

941 If the fruits are coated with wax the rate of water loss can be reduced upto ;

- a. 20-30%
- b. 30-40%
- c. 40-50%
- t. 30-50%**

942 Sweet potatoes can be cured at around 30°C and 90-95% RH for;

- a. 1-2 days prior to storage
- b. 2-5 days prior to storage
- u. 4-7 days prior to storage**
- c. 7-8 days prior to storage

943 In apples internal breakdown can be reduced during cold storage by treating with;

- a. Sodium
- b. Magnesium
- v. Calcium**
- c. Potassium

944 The most common packing material used for mango and citrus in Pakistan is;

- a. Plastic bins
- b. Bamboo baskets
- c. Polythene bags
- w. Wooden crates**

945 The optimum storage temperature for apple ranges from;

- x. 0-1°C**
- a. 2-5°C
- b. 5-10°C
- c. 10-15°C

946 After harvest the rate of respiration increases in;

- a. Tropical fruits
- b. Non-climacteric fruits
- c. Temperate fruits
- y. Climacteric fruits**

947 Which is the best indicator of metabolic activities and potential storage life of fresh produce;

- a. Rate of transpiration
- z. Rate of respiration**
- b. Rate of ethylene production
- c. Rate of weight loss

948 As storage period of most fruits is increased, acidity and vitamin C;

- a. Increase**
- b. Decrease
- c. Remain same
- d. Acidity increases while vitamin c decreases

949 During curing of tuber crops;

- a. Excessive moisture is lost
- b. A waxy layer is developed on the fruit
- c. Storage life increases
- d. All of above**

950 The most common radiation dose used for extending shelf-life of fruits and vegetables ranges between;

- a. 0.01-3.0 kGy**
- b. 5-10 kGy
- c. 10-20 kGy
- d. 20-30 kGy

951 In controlled atmosphere storage;

- a. Temperature and RH is controlled**
- b. Nitrogen concentration is controlled
- c. Oxygen and carbon dioxide is controlled
- d. All of the above

952 Chilling injury is common in;

- a. Temperate fruits
- b. Tropical and sub-tropical fruits**
- c. Deciduous fruits
- d. None of above

953 Which enzyme is involved in ethylene synthesis;

- a. ACC synthase
- b. ACC oxidase
- c. Endoploygalacturonase
- d. a & b**

954 Safe storage temperature for most mango cultivars is;

- a. 5-6°C
- b. 7-8°C
- c. 13°C**
- d. 1-2°C

955 During storage of most fresh produce the relative humidity should be;

- a. 50-60%
- b. 65-75%
- c. 70-80%
- d. 85-95%**

956 Which crop has higher respiration rate;

- a. Cabbage**
- b. Grapefruit
- c. Potato
- d. Tomato

957 Silver thiosulphate extend vase life of cut flowers by;

- a. Anti-bacterial properties
- b. Anti-oxidant properties
- c. Anti-ethylene properties
- d. Anti-auxins properties**

958 Which one is the non-climacteric fruit;

- a. Apple
- b. Mango
- c. Peach
- d. Citrus**

959 Internal browning in fresh produce is the result of ;

- a. Depletion of carbohydrates
- b. Action of polyphenoloxidase (PPO)**
- c. Loss of moisture
- d. Loss of chlorophyll

960 In onions the maturity is determined by;

- a. Bulb size
- b. Bulb colour
- c. Leaves colour
- d. Tops drooping**

961 The stage at which rose flowers should be cut;

- a. When petals are fully open
- b. At tight-bud stage**
- c. When petals starts folding
- d. When the petals show full colour

962 The postharvest quality in carnation flowers is observed better when they are cut at;

- a. Bud stage
- b. Fully open stage
- c. Half bud and half open stage**
- d. All of the above

963 The common fumigant applied to fruit crops after harvest, for controlling postharvest diseases;

- a. Ca(OH)₂**
- a. SO₂
- b. CaO
- c. CO₂

964 The best method of harvesting citrus fruits is;

- a. Pulling
- b. Clipping**
- c. Twisting
- d. Twist-picking

965 The most effective fungicide for controlling citrus fruit diseases caused by *Penicillium* spp. is;

- a. Sodium orthophenylphosphate (SOPP)
- b. Carbendazim**
- c. Thiabendazole (TBZ)
- d. Topsin-M

966 Active ingredients in plants are defined as:

- a. Correcting bodily functions
- b. A restorative of body ailments
- e. Preventing or curing diseases**
- c. Constituents having a medicinal action

967. According to international standards medicinal plants are those plants which have active ingredients in the range of:

- a. 10%
- b. 20%
- c. 40-60%
- f. none of above**

968. The botanical name of Ispaghol is

- a. *Termanilia arjuna*
- b. *Strychnus nuxvomica*
- g. Ocimum bacilum**
- c. *Plantago ovata*

969. The most potential medicinal plant according to HOLY PROPHET (SAW) is

- a. Babool
- b. Zaitoon
- c. Angeer
- h. Kalongi**

970. Best yield of rose oil from rose petals is obtained by

- a. Steam distillation
- b. Vacuum distillation
- c. Enflurage
- i. Carbon dioxide extraction**

971. Aromatic biosynthesis in plants takes place by

- a. Shikimic acid pathway
- b. Acetate hypothesis
- c. Both
- j. None of above**

972. Tea leaves contains

- a. Tannins
- b. Alkaloids
- k. Alkaloids and tannins**
- c. None of above

973. Which plant contain cardio active glycoside

- a. Digitalis spp.
- l. Cardamom**
- b. Ginseng
- c. Lemon spp.

974. Coriander contain volatile oil
m. 0.8%
a. 1.8%
b. 2.8%
c. 5%
975. Alkaloids are
a. Alkali like compounds
n. Neutral compounds
b. Basic compound
c. Complex nitrogen compound
976. Molaurty is defined as number of moles of solute per
a. 100 Liters of solution
b. 10 liter of solution
c. 1000 liter of solution
o. 1 liter of solution
977. In scientific literature referencing is necessary to :
a. Help reader verify the quoted facts
b. Avoid plagiarizing
c. Enable readers to follow up
p. All of above
978. In the case of uniform experimental material which experiment design is most suitable.
a. RCBD
b. Latin Square
q. CRD
c. None of above
979. In case of two sources of variation, which experimental design is suitable.
a. CRD
b. RCBD
r. Latin Square
c. ANOVA
980. In order to decrease standard error
a. Number of treatment should be increased
b. Size of experimental blocks should be increased
c. Number of people taking observation to be increased
s. Replication numbers should be increased
981. Tetrazolium chloride test is used for
a. Estimation of chlorine in leaves
b. Detection of nitrogen content
t. Viability of seeds
c. None of above
982. In Pakistan consumption of fruits and vegetables
a. Is equal ratio
b. Fruit is more
u. Vegetables is more
c. According to WHO standard
983. High temperature before harvest in plums causes _____
a. Die back
v. Kelsey spot
b. Powdery mildew
c. Sun burn
984. Green bananas are injured when exposed to a temperature below _____ °F:
a. 40
w. 50
b. 60
c. 70

- 985 Ammonia is converted into _____ by bacteria during first step:
x. Nitrites
a. Nitrides
b. Nitrates
c. N
- 986 Maximum nitrogen fixation per acre is _____ lbs annually :
y. 250
a. 75
b. 150
c. 125
- 987 Cuttings with _____ show more success of rooting :
z. Opening buds
a. Leaves
b. Slanting cut
c. Round cut
- 988 _____ removes the inhibiting substances and the organs producing them
a. Topping
b. Disbudding
c. Pinching
d. Girdling
- 989 _____ is produced in the meso and endocarp of sound ripe apples :
e. Ethylene
a. Guanine
b. ABA
c. IBA
- 990 Tops of peach budded on Marianna plum suddenly fail because of _____ break down :
f. Phloem tissue
a. Cambial contact
b. Lack of callus formation
- 991 Growth substances are translocated both up and down in the stem chiefly in the _____ :
g. Phloem
a. Xylem
b. Cortex
c. Pith
- 992 More fruits spur formation is observed in apple due to _____ pruning :
h. Light
a. Moderate
b. Heavy
c. No pruning
- 993 Light summer pruning helps in proper _____ :
i. Coloration
a. Development
b. Maturity
c. Quality
- 994 Tree growth becomes more compact as a result of _____ :
j. Heading back
a. Thinning out
b. Fine pruning
c. No pruning
- 995 Green leaves of plants are able to _____ all the vitamins that they can use :
k. Synthesize
a. Reduce
b. Uptake
c. Store

- 996 Soil particles carry _____ charge:
l. Negative
a. Positive
b. No charge
c. Positive + Negative
- 997 Citrus canker is a :
a. Fungal disease
m. Bacterial disease
b. Nutrient deficiency
c. Presence of pebbles in soil
- 998 Soil solution becomes _____ under dry conditions :
n. Dilute
a. Very dilute
b. Concentrated
c. Very concentrated
- 999 Nitrogen is absorbed in form of _____:
a. Nitride
b. Nitrite
o. Nitrate
c. NH_4
- 1000 Many non essential elements are toxic to plants in _____ amounts:
a. Very low
p. Low
b. High
c. Very high

Keys of MCQ's

Q #	ANS	Q #	ANS	Q #	ANS	Q #	ANS
1	B	2	A	3	B	4	A
5	A	6	B	7	C	8	D
9	C	10	D	11	D	12	A
13	A	14	D	15	D	16	A
17	D	18	D	19	D	20	D
21	B	22	C	23	A	24	C
25	A	26	D	27	A	28	A
29	B	30	B	31	A	32	A
33	B	34	D	35	A	36	A
37	B	38	D	39	B	40	A
41	D	42	B	43	C	44	D
45	D	46	D	47	A	48	A
49	A	50	D	51	A	52	B
53	C	54	B	55	C	56	A
57	C	58	D	59	A	60	B
61	C	62	A	63	B	64	D
65	B	66	C	67	D	68	C
69	B	70	A	71	D	72	A
73	A	74	A	75	B	76	B
77	C	78	A	79	C	80	B
81	B	82	B	83	B	84	A
85	B	86	D	87	A	88	D
89	D	90	C	91	A	92	C
93	A	94	C	95	D	96	A
97	A	98	A	99	A	100	A
101	B	102	A	103	A	104	A
105	A	106	A	107	A	108	C
109	A	110	B	111	A	112	A
113	A	114	A	115	A	116	B
117	A	118	B	119	A	120	A
121	A	122	A	123	A	124	D
125	D	126	C	127	C	128	A
129	A	130	C	131	A	132	A
133	A	134	A	135	A	136	A
137	B	138	A	139	B	140	A
141	A	142	D	143	A	144	C
145	A	146	C	147	A	148	A
149	B	150	B	151	A	152	A
153	A	154	B	155	D	156	A
157	A	158	A	159	A	160	C
161	B	162	D	163	A	164	D
165	A	166	A	167	D	168	A
169	C	170	A	171	A	172	D
173	A	174	C	175	B	176	A
177	C	178	A	179	B	180	D
181	A	182	C	183	C	184	A
185	C	186	B	187	B	188	C
189	A	190	A	191	D	192	C
193	A	194	A	195	A	196	B
197	C	198	A	199	C	200	A
201	A	202	D	203	B	204	C
205	B	206	C	207	C	208	C
209	B	210	D	211	D	212	D

213	D	214	C	215	C	216	A
217	A	218	B	219	B	220	C
221	C	222	C	223	C	224	A
225	A	226	D	227	A	228	A
229	A	230	C	231	A	232	A
233	A	234	A	235	A	236	B
237	A	238	C	239	A	240	B
241	A	242	A	243	A	244	A
245	A	246	A	247	A	248	C
249	A	250	C	251	C	252	D
253	B	254	A	255	B	256	C
257	A	258	D	259	C	260	B
261	C	262	A	263	D	264	A
265	C	266	A	267	B	268	C
269	B	270	B	271	C	272	C
273	A	274	A	275	A	276	C
277	C	278	C	279	B	280	D
281	A	282	B	283	C	284	A
285	D	286	D	287	B	288	B
289	A	290	B	291	C	292	A
293	C	294	A	295	D	296	C
297	D	298	D	299	D	300	A
301	A	302	C	303	A	304	A
305	A	306	A	307	C	308	A
309	A	310	A	311	A	312	B
313	B	314	D	315	C	316	C
317	A	318	B	319	A	320	C
321	A	322	C	323	B	324	A
325	C	326	A	327	A	328	A
329	A	330	A	331	D	332	D
333	D	334	B	335	A	336	C
337	C	338	D	339	B	340	C
341	B	342	C	343	A	344	D
345	D	346	A	347	A	348	D
349	C	350	B	351	C	352	B
353	D	354	D	355	A	356	D
357	A	358	A	359	D	360	D
361	A	362	A	363	A	364	C
365	B	366	B	367	D	368	A
369	B	370	A	371	D	372	C
373	C	374	A	375	C	376	C
377	D	378	D	379	D	380	A
381	D	382	D	383	D	384	A
385	D	386	B	387	B	388	D
389	B	390	C	391	B	392	C
393	A	394	D	395	A	396	A
397	D	398	A	399	C	400	A
401	C	402	C	403	A	404	A
405	C	406	A	407	A	408	A
409	A	410	A	411	D	412	D
413	C	414	A	415	D	416	D
417	B	418	B	419	B	420	A
421	A	422	B	423	B	424	D
425	C	426	C	427	A	428	B
429	D	430	A	431	B	432	B
433	C	434	A	435	B	436	B

437	A	438	C	439	C	440	C
441	C	442	D	443	D	444	B
445	D	446	B	447	B	448	A
449	B	450	B	451	D	452	A
453	A	454	B	455	B	456	D
457	A	458	B	459	C	460	C
461	D	462	A	463	A	464	B
465	B	466	B	467	D	468	C
469	C	470	B	471	D	472	C
473	B	474	B	475	B	476	C
477	C	478	A	479	D	480	B
481	A	482	C	483	B	484	C
485	B	486	B	487	A	488	B
489	D	490	C	491	B	492	B
493	B	494	A	495	B	496	B
497	C	498	A	499	B	500	B
501	C	502	B	503	C	504	B
505	A	506	B	507	C	508	D
509	A	510	B	511	C	512	B
513	C	514	D	515	A	516	D
517	B	518	D	519	C	520	B
521	B	522	C	523	C	524	D
525	B	526	B	527	D	528	C
529	D	530	D	531	A	532	A
533	C	534	C	535	C	536	C
537	C	538	A	539	B	540	D
541	B	542	D	543	D	544	B
545	D	546	D	547	C	548	A
549	D	550	B	551	B	552	D
553	D	554	D	555	B	556	C
557	D	558	C	559	B	560	D
561	B	562	B	563	A	564	B
565	C	566	A	567	C	568	C
569	C	570	A	571	B	572	A
573	A	574	A	575	C	576	C
577	B	578	D	579	D	580	D
581	B	582	A	583	D	584	A
585	B	586	B	587	A	588	C
589	C	590	A	591	A	592	A
593	A	594	D	595	D	596	A
597	B	598	A	599	B	600	D
601	C	602	B	603	C	604	A
605	D	606	A	607	A	608	B
609	D	610	B	611	C	612	C
613	A	614	B	615	C	616	A
617	B	618	A	619	B	620	A
621	B	622	A	623	A	624	D
625	C	626	A	627	B	628	B
629	A	630	B	631	B	632	D
633	D	634	B	635	D	636	C
637	B	638	D	639	D	640	D
641	B	642	C	643	B	644	D
645	B	646	A	647	A	648	B
649	A	650	D	651	C	652	A
653	A	654	C	655	B	656	C
657	D	658	B	659	D	660	A

661	A	662	C	663	D	664	B
665	C	666	B	667	C	668	A
669	C	670	B	671	A	672	B
673	B	674	C	675	D	676	D
677	D	678	C	679	A	680	C
681	A	682	B	683	A	684	C
685	C	686	A	687	C	688	D
689	C	690	D	691	B	692	D
693	D	694	C	695	D	696	C
697	C	698	C	699	B	700	C
701	B	702	C	703	B	704	A
705	B	706	C	707	D	708	A
709	C	710	B	711	C	712	B
713	A	714	C	715	D	716	D
717	C	718	C	719	A	720	A
721	C	722	C	723	A	724	A
725	B	726	B	727	C	728	B
729	A	730	D	731	B	732	A
733	D	734	D	735	C	736	C
737	D	738	D	739	B	740	D
741	C	742	B	743	C	744	A
745	C	746	D	747	B	748	B
749	A	750	B	751	A	752	B
753	D	754	A	755	D	756	D
757	C	758	A	759	D	760	B
761	D	762	B	763	C	764	D
765	A	766	C	767	A	768	D
769	B	770	D	771	D	772	A
773	C	774	A	775	B	776	A
777	D	778	A	779	C	780	D
781	D	782	B	783	C	784	A
785	D	786	B	787	C	788	D
789	B	790	A	791	B	792	A
793	B	794	C	795	D	796	C
797	C	798	D	799	A	800	B
801	D	802	D	803	C	804	C
805	A	806	A	807	D	808	A
809	A	810	B	811	B	812	D
813	D	814	D	815	A	816	A
817	D	818	A	819	A	820	A
821	C	822	B	823	D	824	C
825	B	826	A	827	B	828	C
829	A	830	C	831	B	832	B
833	C	834	B	835	A	836	B
837	C	838	A	839	A	840	C
841	B	842	A	843	B	844	B
845	C	846	A	847	B	848	A
849	B	850	C	851	B	852	A
853	B	854	A	855	B	856	A
857	B	858	B	859	B	860	C
861	C	862	B	863	B	864	B
865	A	866	B	867	B	868	B
869	B	870	A	871	A	872	B
873	C	874	A	875	B	876	C
877	A	878	B	879	B	880	A
881	B	882	B	883	B	884	D

885	C	886	C	887	C	888	B
889	C	890	C	891	C	892	B
893	A	894	B	895	C	896	C
897	C	898	B	899	C	900	C
901	A	902	A	903	B	904	B
905	B	906	B	907	B	908	B
909	B	910	B	911	B	912	B
913	C	914	C	915	B	916	A
917	C	918	B	919	A	920	B
921	A	922	A	923	A	924	C
925	A	926	C	927	D	928	A
929	C	930	C	931	B	932	B
933	D	934	A	935	C	936	A
937	C	938	A	939	A	940	C
941	D	942	C	943	C	944	D
945	A	946	D	947	B	948	A
949	D	950	A	951	A	952	B
953	D	954	C	955	D	956	A
957	D	958	D	959	B	960	D
961	B	962	C	963	A	964	B
965	B	966	C	967	D	968	C
969	D	970	D	971	D	972	C
973	B	974	A	975	B	976	D
977	D	978	C	979	C	980	D
981	C	982	C	983	B	984	B
985	A	986	A	987	B	988	A
989	A	990	B	991	A	992	A
993	A	994	B	995	A	996	A
997	B	998	A	999	C	1000	B