

2. Sugar contain in datepalm is 60-65 % and 3550 calories kg
3. *P. sylvestris* (wild) used for production of crude suger (gur) and Neera
4. Interspecific- *P. dactylifera* x *sylvestris* x *canariensis* successful and shown **Metaxenic** effect
5. *P. sylvestris*, *humilis*, *farinifera* are wild spp found in India
6. Rain free period is required time of ripening fruits (pind rotting)
7. Flowering  $25^{\circ}\text{C}$ , ripening  $50^{\circ}\text{C}$
8. Heat units 1950 to 3650 base temp.  $10^{\circ}\text{C}$
9. Propagation by offshoots (suckers) 4-5 year old and 8-15 kg, emerg from base, tissue culture technique is standerized but yet not commercialized
10. *Oligonuchus afrasiaticus* and *o. pratensis* are mite known as Bou faroua disease, the effect date at hababouk stage
11. Gander or kimri (fruit attain size and remain hard green) . doka or khalal (fruit full growth, yello.red) . dang or rutab (softening of fruit start from tips finally whole fruit soften), pind or tamar (fully ripened) **GNP**
12. Two major problem Inflorescence rot (Bayoud) *fusarium oxysporum* fsp. *albedinis* and red palm weevil (*Rhynocophorus ferrugineus*)
13. Inflorescence is called spadix *2. fusarium* > *Spadix*
14. Stable food of middle East and N. Africa
15. Opt. storage tem.  $0\text{C}$  6 to 12 month
16. Leaf pruning is essential (in June)

### PLUM

1. Plum (*Prunus domestica*,  $6x=48$ ) is a allohexaploid, cross of *P. cerasifera* (16)x *P. spinosa* (32)  $n=7$   $2n=14$
2. *P. cerasifera* progenitor for all plum species
3. *P. maritima* is a American plum (Beach plum)
4. *P. bessyi* is a cold hardy spp.
5. Rootstocks used in plum -
  - a. Myrobalam (Myrobalam 29, MyrobalamB, M.GF-31, M.2-7, M.5-Q), St. julion (vigorous), Brampton (vig.), Pixy (Dwarfing)..... Those are clonal rootstocks in plum.
  - i. Other clonal selection RS are German prune, Italian prune, Mirabelle de Nancy
6. Wild peach, wild apricoat (Zardalu), Behami (Almond XcPeach - natural hybrid)..... seedling RS in plum

Behami  $\rightarrow$  Almond X peach (Natural hybrid)  
 Pixy (Dwarfing) RS, Myrobalam

7. Pollen storage temp.  $2-8^{\circ}\text{C}$ , RH. 50% ...4-5 year
8. Gametophytic self incompatibility
9. Flesh colour Red > yellow
10. Intensity of anthocyanin and shape of fruit is governed by polygenes
11. Branch canker disease.....single recessive gene
12. Low chilling varieties...Alucha Purple Titron, Alubukhara → low chilling
13. Japanese plum.....Santarosa, Beauty, Methely, Meriposa, Satsuma
14. Santarosa, Beauty, Meriposa....are shelf fruitful used as pollinizers for plum
15. Plum having high sugar content....dried whole fruit without any fermentation....known as Prune
16. European plum(1000-1200) high chilling requirement than Japanese plum (700-1000)
17. Japanese plum are shelf unfruitful depends on pollinizer ...every 3<sup>rd</sup> tree in every 3<sup>rd</sup> row with pollinizer.
18. Flowering takes place on one year old shoot or 2 year old spurs
19. Central modified leader system in India, for spreading growth habit...open central (Europe)
20. Japanese plum varieties are (over bearing) required heavy pruning and European plum pruned lightly (bear on spurs)
21. Best time for pruning is early spring, mid summer....to avoid winter risk of silver leaf disease
22. Highly perishable, storage at  $0^{\circ}\text{C}$ , RH-90-95% for 2-3 weeks
23. Shelf fruitful varieties set fruits 30% and shelf unfruitful sets 1.5% fruits which need pollinizers (Santarosa, Red Heart, Elephant Heart, Wickson.)

### Fungicides

**Chaubattia paste** – 300g copper carbonate + 800g Redlid + 1ltr lin seed oil

**Bordeaux paste**- copper sulphate 1kg + 1kg lime +10lt water

### CITRUS

1. Trifoliate leaf > monofoliate
2. Nucellar embryony.....dominate gene
3. Polyembryony.....Recessive
4. CTV.....Dominant allele

5. Thorniness, pubescence, oil glands..... dominant
6. Satsuma mandarin and Washington novel orange are pollen sterile type produces parthenocarpic fruits.
7. Kinnow introduced from USA in 1958 in south India and 1959 in Punjab.
8. Pramalani and vikram selection of acid lime from MAU
9. Tangors.....C.sinensis X C.reticulata
10. Tangelos....C.reticulata X C.paradisi
11. Tetraploid ....Hongkong (wild kumquat). Triploid.....Tahati lime
12. Bud sport mutants..... Washington novel orange, shamouti orange, marsh grapefruit, salustiana orange
13. Clausellin mutant of mandarin and foster hudson of grapefruit
14. Foot rot suscept.....sweet orange, lemon, sweet lime, Resist...sour orange, Poncirus
15. Tristiza suscep.....sour orange, sweet lime
16. Exocortic.....Rangapure lime, sweet lime, poncirus, citranges,
17. Psorosis ..... sweet orange and mandarin suscept.
18. No rootstock is resistance to greening
19. Bizzare orange.....Sour Orange X Citron (priclinal chimera)
20. Granulation....suscept.....Dancy mandarin, sweet orange (Hamalin and Mosambi)
21. Carrizo (citrange).....burrowing nematode resist. RS. Popular in florida.
22. Citrus greening..... sweet orange and mandarin suscept.. Toler....lime, pummelo
23. Rootstocks used in citrus....sour orange. Trifoliata Orange, Rangapur lime, Rough lemon, Citrange, cleoptra mandarin, C. macrophylla, flying dragon (dwarfing)
24. Globally a total of 33 genera and 224 spp. In citrus
25. Eremocitrus and Microcitrus (Asutrailia), Fortunella and Poncirus (china), Clymenia (Guinea), citrus (SE Asia)
- 26.
27. Grape fruit is a bud sport of pummel (shaddock)
28. Swingles classified citrus in to 16 spp. and Tanak's 144 spp.

## APPLE

29. Malus domestica, Central Asia,  $2n=34$ , S.family- Maloidae, 30 genera and 1000 Spp., allopolyploidization
30. High tannin content making cidar

31. Fruit size shape quality productivity, low chilling requirement, flowering time, spur type...polygenic....
32. Dwarfing capacity,...single recessive, fruit color...Yellow>Red>Green
33. Edible portion is fleshy thalamus, flower terminally from mixed buds
34. Early ripening cultivar poor seed germination whole late..good
35. Golden Deli., Rome beauty, Jonagold, ...introduced from USA and McIntosh from Canada. Fuji from Japan, Gala and Breaburn from New Zealand
36. Standard colour mutant varieties are Vance Delicious, Top Red, Skyline . Supreme. Hardiman. Brigyt n Early, Royal Red
37. Chance seedling selection ...Elster, Gala, Jonagold, Pink lady From Golden Delic., Empire and Fiji from Delicious, Breaburn from Nilson, Rome Beauty (cooking apple) from Bella de Bok Koop
38. Fruit born on short shoot called as spurs
39. Inhibition of flesh oxidation (brownig ) , low level of PPO. High tannin content,
40. Wooly Aphid resistance.....Northern apy, Ivorys, M.halliana, hupehensis. MM106, MM111
41. Apple scab.....M floribunda, micromalus, baccata jackii. Antonoka, Prima, Priscilla, Jonafree, Liverty.
42. Fire blight....M. fusa, M. Floribunda., M7
43. Tree size control....M7,M27....
44. Dwarfing effect....N.spy, McIntosh, Otwa521.
45. Mildew resist....., McIntosh, M. Robusta, zump, sargentii, baccata jakki. M9
46. Autonomous Apomicts.....M.sikkimensis, M.hupenthesis
47. MM104,106 (SEMI DWARF,50% nd 70% reduced canopy), MM109,MM111...vigrous, drought tolerance
48. Draft Genome 5700 genes, size 603.9 Mb (Golden Delicious) in 2010
49. Wooly Aphid (*Eriosoma lanigerum*) is introduced from Japan.

#### Model Questions

1. Phalsa belongs to family a. Rutaceae b. Sapindaceae c. Tiliaceae d. Rubiaceae
2. Lalit is variety of a. Jamun b. Sapota c. Guava d. Litchi
3. Predominant organic acid found in carambola is a. Mallic acid b. Ascorbic acid c. Oxalic acid d. Phytic acid
4. Albinism is a physiological disorder found in a.Strawberry b. Apple c. Pear d. Peach
5. Fruit type of pomegranate is a. Drupe b. Syconus c. Capsule d. Balausta
6. Polyembryony is found in a. mango b. Citrus c. Jamun d. All of these
7. Ornithophilous pollination is observed in a. Citrus b. Pineapple c. Banana d. Both b & c
8. Most of the cultivated banana are a. Diploid b. Triploid c. Tetraploid d. Hexaploid
9. Surya is cultivar of a. Mango b. Litchi c. Papaya d. Jackfruit

10. Pruning of grape is done twice in a. South India b. West India c. North India d. Central India
11. Sai Sarbati is cultivar of a. Sweet orange b. Kagzi lime c. Mandarin Orange d. Pummelo
12. Hydrogen cyanamide is used for uniform bud break in a. Mango b. Litchi c. Grape d. Pomegranate
13. Major producer of Litchi is a. West Bengal b. Punjab c. Bihar d. Tripura
14. Ultra dwarf rootstock of apple is a. M-9 b. M-4 c. MM-111 d. M-27
15. Triple sigmoid curve is found in a. Mango b. Papaya c. Kiwi Fruit d. Jackfruit
16. Fruit necrosis in aonla is caused by the deficiency of a. Manganese b. Boron c. Calcium d. Zinc
17. Goma Kirti is the cultivar of a. Betelvine b. Mangosteen c. Ber d. Jamun
18. 'Amb Red' is cross between a. Red delicious × Ambri b. Starking delicious × Ambri c. Ambri × Golden delicious d. Royal Delicious × Ambri
19. Training system mainly followed in Pear is a. Open centre b. Central leader c. Modified leader d. Espalier system
20. Ripening of fruit is characterized as a. Anabolic phase b. Catabolic phase c. Increase in respiration d. Both b & c
21. High density orcharding facilitates a. Light utilization b. Weed control c. More yield per unit area d. All of these
22. Family of *Carrisa carandas* a. Caricaceae b. Tiliaceae c. Apocynaceae d. Moraceae
23. Stenospermocarpy is found in a. Mango b. Citrus c. Grape d. Loquat
24. In Mango which chemical used as anti-malformin a. Ascorbic acid b. Glutathione c.  $K_2S_2O_3$  d. All
25. Arunika, a mango hybrid is cross between a. Amrapali × Janardan Pasand b. Amrapali × Vanraj c. Amrapali × Ambika d. Vanraj × Amrapali
26. Richest source of vitamin C is a. Aonla b. Acid Lime c. Grape d. Barbados Cherry
27. Recalcitrant seeds are found in a. Mango b. Citrus c. Mangosteen d. All of these
28. Mulching is most important cultural practice in cultivation of a. Apple b. Pear c. Peach d. Strawberry
29. Granulation is serious problem in a. Mango b. Citrus c. Mangosteen d. Guava
30. Indicator plant of tristeza disease is a. C. paradisi b. C. aurantifolia c. C. limonia d. C. sinensis

31. Dwarfing rootstock used in high density planting of ber is a. *Z. jujube* b. *Z. nummularia*  
c. *Z. lotus* d. *Z. rotundifolia*
32. Cricket ball is a cultivar of A. Guava b. Litchi c. Sapota d. Kokum
33. For the Banana, Mango, Citrus, Tomato better de-greening temperature is  
a. 25°C b. 26°C c. 27°C d. 28°C
34. Dogridge is rootstock of a. Guava b. Phalsa c. Grape d. Citrus
35. A method of artificial pollination of fig trees by wasps is called as a. Mattocking b.  
Caprification c. Breba d. Coppicing
36. Which of the following is a climacteric fruit crop a. Grape b. Pomegranate c. Fig  
d. Litchi
37. Loquat is commercially propagated by a. Seed b. Hard wood grafting c. Air layering d.  
Soft wood grafting
38. Micro propagation is largely used for seedling production in a. Banana b. Strawberry c.  
Citrus d. Papaya
39. Fruit bagging is used for better colour and quality fruit production in a. Litchi b.  
Pomegranate c. Apple d. All of these
40. Which fruit is commonly known as Fruit of New World a. Mangosteen b. Jackfruit c.  
Avocado d. Passion fruit
41. Rootstock for HDP in citrus is: a. Rangpur Lime b. Trifoliolate Orange c. Troyer  
Citrange d. Fying Dragon
42. Hermaphrodite variety of Papaya is: a. Sunrise Solo b. Surya c. Coorge Honey Dew  
d. Pusa Nanha
43. Pollination in walnut is by: a. Wind b. Insect c. Birds d. Both a & b
44. Most widely adopted method of training in fruit crops is a. Central leader b. Open centre  
c. Modified leader d. None
45. Most suitable system of planting in highly fertile soil is a. Triangular b. Quincunx c.  
Square d. Rectangular
46. The wilt resistant rootstock of Guava is a. *P. guajava* b. *P. friedrichthalinum* c. *P.*  
*benjamina* d. None
47. Which of the following is cheapest artificial ripening inducer in Banana a. Ethrel b.  
Calcium carbide c. 2, 4-D d. Acetylene
48. Which of the crop is devoid of root hairs a. Mangosteen b. Durian c. Kiwi d.  
Persimmon

49. Which of the following hybrid is crossed between Bangalore blue x Anab-e-shahi a. Arka Hans b. Arka Kanchan c. Arkavati d. Arka Shyam
50. Strawberry is resistant to deficiency of a. Mo b. Zn c. Mg d. Mn
51. Jelly seed is a disorder of a. Banana b. Papaya c. Mango d. Guava
52. Who reported Black tip disease in Mango a. Santaram b. Woodhouse c. G.S. Cheema d. Burn & Prayag
53. Banana streak virus is transmitted through a. Aphids b. Thrips c. Mealy bugs d. Nematodes
54. NA-5 (Krishna) is a chance seedling of a. Banarasi b. Chakaiya c. Francis d. NA
55. Guava wilt is most common in a. Acidic soil b. Alkali soil c. Neutral soil d. Sodic soil
56. Edible part of litchi is a. Seed b. Freshy aril c. Mesocarp d. Kernel
57. Arka Sahan is a cross between a. *Annona squamosa* x *Annona atemoya* b. *Annona atemoya* x *Annona glabra* c. *Annona atemoya* x *Annona squamosa* d. None
58. Pecanut belongs to family a. Rosaceae b. Actinidiaceae c. Juglandaceae d. Anacardiaceae
59. Santa rosa is popular hybrid of a. Apple b. Pear c. Peach d. Plum
60. Edible part of strawberry is a. Mesocarp b. Fleshy thalamus c. Pericarp d. None
61. Recommended pollenizers in apple is a. Golden Delicious b. Royal Delicious c. Red Delicious d. Ambri
62. Kiwi fruit is propagated by a. Stem cutting b. Grafting c. T-budding d. Patch budding
63. Paradox is a rootstock /hybrid of a. Almond b. Walnut c. Pecannut d. Peach
64. Sunscald is a disorder of a. Mango b. Banana c. Papaya d. Pineapple
65. Artificial tetraploid of Banana is a. Bodles Altafort b. Klue teparod c. Pisang Lilin d. Gros Michel
66. Banana variety used for making baby food is a. Virupakshi b. Nendran c. Kunnan d. Monthan
67. The ideal weight of sword sucker of Banana is a. 500 gm b. 750 gm c. 1 kg d. 1.5 kg
68. Gandevi selection is a selection from a. Gross Michel b. Dwarf Cavendish c. Lalkela d. Poovan

69. The triploid species is a. *Citrus reticulata* b. *Citrus latifolia* c. *Citrus sinensis*  
d. *Citrus grandis*
70. Which of the following of Pineapple variety is triploid a. Kew b. Queen c. Mauritius d. Cayenne
71. Banganpalli x Alphonso is a cross between a. Arka Aruna b. Arka Anmol c. Arka Neelkiran d. Arka Puneet
72. Kaveri is a interspecific hybrid of a. Phalsa b. Avocado c. Passionfruit d. Persimmon
73. Black tip of mango is due to a.  $SO_2$  b. CO c.  $NO_2$  d. All
74. *Calimyrna* fig belongs to which type of fig a. Staminate b. Pistillate c. Parthenocarpic d. Hermaphrodite
75. Fruit of papaya is a. Pome b. Drupe c. Nut d. Berry
76. Which bahar fruits are more prone to cracking in pomegranate a. Hasta b. Mrig c. Ambe d. All
77. The genotype for Maleness in papaya is a. M1m b. M2m c. mm d. None
78. Coloured seedless var. of grape is a. Pusa seedless b. Muscat c. Thompson seedless d. Beauty seedless
79. Richest source of sugar is a. Sapota b. Karonda c. Dates d. Mango
80. False bloom is a disorder associated with excessive water, it is observed in which of the following fruit crop a. Straw berry b. Crane berry c. Rasp berry d. None
81. Fruits of Ambe-bahar of Guava ripens in the month of a. June-July b. Feb.-March c. Apr.-May d. July-Sept.
82. Inflorescence of ber is a. Panicle b. Cyme c. Raceme d. Compound
83. Nematode resistant rootstock of Fig is ?  
a. *F. infectoria* b. *F. glomerata* c. *F. religiosa* d. *F. bengalensis*
84. Grafting is not attempted in Monocot because  
a. Vascular bundles are scattered b. Cambium layer is absent  
c. Absence of Endodermis d. Sclerenchymatous hypodermis
85. Double sigmoid growth curve is found in a. Papaya b. Kiwi fruit c. Both d. None
86. Maharashtra having maximum fruit area under a. Banana b. Grape c. Both d. None
87. Which of the following is known as queen of nuts a. Cashew b. Pecanut c. Water chestnut d. Almond



88. Which crop is known as apple of tropics a. Mango b. Apple c. Guava d. Sapota
89. Banana is also known as a. Adam's fig b. Tree of wisdom c. Kalpataru d. All of the above
90. Which fruit crop is also known as Melon tree a. Mango b. Lemon c. Papaya d. Aonla
91. Harvesting period of mango is a. December - February b. March - August c. September - October d. May - July
92. Rich source of fat is a. Walnut b. Almond c. Cashew d. None
93. Limon results in bitterness on a. Reduction b. Oxidation c. Neutralization d. None
94. Gametophytic self-incompatibility is found in a. Ber b. Mango c. Aonla d. Cocoa
95. Origin of Aonla is a. Indo-Malaya b. Indo-Burma c. Indo China d. None
96. Ploidy level of kiwi fruit is a. Autotriploid b. Autotetraploid c. Auto Hexaploid d. Auto Octaploid
97. Star apple is common name of a. Carambola b. Phalsa c. Avocado d. Mango
98. Harvesting time for mandarin in South India is a. Feb - March b. Dec - April c. Dec - February d. Aug - October
99. Which fruit produces low ethylene a. Grape b. Passion fruit c. Apple d. Pineapple
100. Which of following to increase berry size in Grapes a. NAA b. HCN c. GA d. MH
101. Arka Mridula is the variety of a. Pomegranate b. Guava c. Sapota d. Litchi
102. Low chilling variety of pear is a. Patharnakh b. LeConte c. Gola d. All
103. Which temperate fruit crop have lowest chilling requirement a. Apple b. Pear c. Peach d. Almond
104. Gynodiocious variety of papaya is a. Pusa Majesty b. Pusa Nanha c. Pusa Dwarf
105. Marmelosin is present in crop a. Bael b. Jack fruit c. Mangosteen d. Karonda
106. Polyembryony is seen in a. Ber, Aonla b. Jamun, Citrus c. Grape, Guava d. None
107. In which fruit, "Caging technique" of Hybridization developed at IARI New delhi a. Sapota b. Mango c. Aonla d. Custard Apple
108. Citrumelo is derived from a. Trifoliate Orange x Grape fruit b. Trifoliate Orange x Sweet orange c. Trifoliate Orange x Mandarin d. Trifoliate Orange x Pummelo
109. Indian black berry is a. Aonla b. Mango c. Rasp berry d. Jamun
110. Which of the following is non climatic fruit a. Sapota b. Guava c. Banana d. Pineapple
111. Terminal bearing habit is found in a. Mango b. Papaya c. Guava d. Orange
112. National fruit of India is a. Guava b. Apple c. Mango d. Citrus

113. Two crop of mango is taken in which state of India a. Uttar Pradesh b. Haryana  
c. Tamil Nadu d. Kerala
114. Salt resistant rootstock of mango is a. Kurukkan b. Moovandan c. Nekkare d. All of  
the above
115. Ideal temperature for mango cultivation is a. 10 - 15°C b. 24 -27°C c. 35- 38°C d. 45  
- 50°C
116. Higgins is the variety of a. Guava b. Mango c. Banana d. Apricot
117. Self-incompatible mango cultivar is a. Deshehari b. Langra c. Chausa d. All of the  
above
118. Sweetest variety of mango is a. Deshehari b. Langra c. Chausa d. Kesar
119. Banganpalli variety of mango is most popular in which state a. Kamataka b.  
Andhra Pradesh c. Gujarat d. Assam
120. Parents of Mallika variety of mango are a. Neelam x Alphonso b. Ratna x  
Alphonso c. Neelam x Deshehari d. Deshehari x Neelam
121. Export variety of mango is a. Alphonso b. Kesar c. Both d. None
122. Sigatoka leaf spot is serious disease in a. Apple b. Mango c. Banana d. Citrus
123. Most of cultivated banana are a. Diploid b. Triploid c. Tetraploid d. None
124. Desukering is important cultural practice in a. Mango b. Citrus c. Banana d. Sapota
125. Diploid variety of banana is a. Lady finger b. Safed velchi c. Both d. None
126. Banana variety suitable in multistory system planting a. Poovan b. Nendran c. Hill  
banana d. Monthan
127. Banana is rich source of a. Sodium b. Potassium c. Calcium d. Iron
128. Commercial method of propagation in papaya is a. Sucker b. Seed. c. Budding d.  
Grafting
129. Which fruit plant is susceptible to water logging a. Mango b. Sapot c. Banana d.  
Papaya
130. Gynodioecious variety of papaya is a. Pusa Majesty b. Sunrise Solo c. Taiwan
131. Dioecious variety of papaya is a. Pusa Dwarf b. Surya c. Pusa Delicious d.  
CO-3
132. Yellow pigment present in papaya is a. Caricaxanthin b. Piperine c. Both d. None
133. Citrus fruits are mainly propagated through a. T-budding b. Tongue grafting c. Seed  
d. Suckers
134. Tounge grafting is mostly followed in crop a. Litchi b. Avocado c. Cherry d. Apple