

ASRB-NET/STO/SMS

Fruit Science

(Memory based Question Paper-2023)

Q. 1 In every winters peach requires heavy pruning because:

- A) It bears on current season's growth **B) It bears on previous season's growth only**
C) It bears on two years' old wood only D) It bears on spur

Q. 2 Mango wilt/decline is spread through:

- A) Mealy bug B) White grub **C) Beetle** D) Leaf hopper

Q. 3 By using which standard rootstock of apple, ones can accommodate 4444 plants per hectare in an orchard:

- A) M-7 B) MM-104 **C) M-9** D) MM-111

Q. 4 Which of the following in not matched correctly:

- A) Date palm: monoecious** B) Papaya: polygamous
C) Walnut: Monoecious D) Kiwifruit: dioecious

Q. 5 CO₂ concentration in polyhouse should be:

- A) 0.11%** B.) 0.20% C.) 2.0% D) 8.0 %

Q. 6 *Mangifera dongnaiensis* and *M. orophila* cold species of mango are grown in the restricted area of:

- A) Mediterranean region** B) Central America C) Korean Island D) Central Asia

Q. 7 Controlled environmental conditions having which two gases composition:

- A) CO₂ and NO₂ B) CO₂ and C₂H₄ **C) CO₂ and O₂** D) O₂ and N

Q. 8 Queen of the nut crops is:

- A) Apricot B) Walnut **C) Pecan nut** D) Pistachionut

Q. 9 *Musa velutina* species of banana is native of which state of India:

- A) Assam** B) Bihar C) Tripura D) Mizoram

Q. 10 Chaubattia Agrim variety of apple is developed through:

- A) Mutation** B) Hybridization C) Clonal Selection D) Introduction

Q. 11. Papaya species require same environmental condition as *Carica papaya*, producing edible fruits and having resistant to PRSV:

- A) *V. cauliflora*** B) *V. pubescence* C) *V. helbornii* D) *V. parviflora*

Q. 12. Which training system is most popular for establishing a HDP apple orchard:

- A) Spindle Bush** B) Open vase C) Cordon D) Tatura trellis

Q. 13. Ploidy level of 'Case' variety of grape is:

- A) 3x **B) 4x** C) 6x D) 2x

Q.14. Akbar variety of apple is a cross between:

- A) Ambri x Golden Delicious **B) Ambri x Cox's Orange Pippin**
C) Starking Delicious x Ambri-81 D) Red Delicious x Ambri-57

Q.15 In which banana variety only 6 leaves are minimum to require for flowering and normal fruit development without affecting fruit quality: (Source: NRCB website)

- A) Poovan **B) Rasthali** C) Karpuravalli D) Nendran

Q.16. Chironji is commercially propagated by which method:

- A) Hard wood cutting B) Tongue grafting **C) Softwood grafting** D) Budding

Q.17. In aonla ideal timing for performing patch budding is:

- A) February-March B) September – October **C) June-July** D) November – December

Q.18. Widest spacing is followed in which fruit crop:

- A) Walnut B) Mango C) Jamun **D) Chestnut**

Q.19 International Treaty on Plant Genetics Resources for Food and Agriculture (ITPGRFA) was first time signed in which year:

- A) **2001** B) 2003 C) 2006 D) 2020

Q. 20. National Biodiversity Authority was established in:

- A) 2001 B) 2002 **C) 2003** D) 2004

Q. 21. Integrated FSSAI Act was enacted in:

- A) 1937 **B) 2006** C) 2008 D) 2011

Q. 22 Classification of banana by Simmonds and Shepherd given in which year:

- A) 1950 **B) 1955** C) 1957 D) 1958

Q. 23. In mango under the protected cultivation flowering can be induced by application of:

- A) PPP3** B) Ethrel C) MH D) NAA

Q. 24. Earliest variety of apricot is:

- A) Chaubattia Madhu **B) Chaubattia Alankar** C) Halman D) St. Ambroise

Q. 25. Cherry disease recently spreads in Himachal Pradesh is mainly caused by:

- A) Bacteria B) Phytoplasma **C) Virus** D) Fungus

Q. 26. Mango variety which did not get GI tag till date:

A) **Kishanbhog** B) Malda C) Khirsapati D) Laxmanbhog

Q. 27. Mango good quality and sized fruits are grown in which system:

A) Square system B) Rectangular system **C) Double Hedge Row System** D) Quincunx system

Q. 28. Which Annona species is having yellow pulp colour:

A) *A. montana* B) *A. glabra* **C) *Annona purpurea*** D) *A. atemoya*

Q. 29. Fruit crop also known as “**Heaven and Hell Fruit**”:

A) Macadamia **B) Durian** C) Rambutan D) Jackfruit

Q. 30. North Star is a dwarf rootstock of which fruit crop:

A) Peach B) Pear C) Plum **D) Cherry**

Q. 31. Draft genome in mango by Indian Genomic Consorting has been submitted for which of the following variety:

A) Alphonso **B) Amrapali** C) Dashehari D) Rumani

Q. 32. Which of the following mango variety is a sister seedling of Pusa Peetamber:

A) Pusa Shrestha **B) Pusa Manohari** C) Pusa Lalima D) Pusa Arunima

Q. 33. In Utah chilling model maximum chilling period are obtained in range of:

A) 0-4 °C B) 4-6 °C **C) 6-7 °C** D) 7-10 °C

Q. 34. Botanical name of yellow skin dragon fruit species is:

A) *Hylocereus undatus* **B) *Hylocereus megalanthus***
C) *Hylocereus costaricensis* D) *Hylocereus polyrhizus*

Q. 35. Gene editing for a fungal disease was first time done in which fruit:

A) Cherry B) Peach **C) Walnut** D) Plum

Q. 36. After harvesting to remove the field heat from produce, most commonly precooling method followed is:

- A) Conduction B) Convection C) Vacuum cooling **D) Dipping in water**

Q. 37. Who develop plum pox virus resistant variety:

- A) R. Scorza** B) H P Olmo C) Abhay Dandekar D) R Schomit

Q. 38. Apple variety “Arctic apple” was developed as the GM crop released in North America for commercial cultivation using the technique of:

- A) Mutation B) Hybridization C) Chromosome Doubling **D) Gene silencing**

Q. 39. Biennial bearing in apple is due to:

- A) Heavy crop load **B) GA3 synthesis in seeds** C) Phenol accumulation D) More fruiting

Q. 40. Arka Surya breed up to how many generations:

- A) F-14th generation** B) F-16th generation
C) F-17th generation D) F-18th generation

Q. 41. For a one hectare area in UHDP system of guava number of plants can be accommodate:

- A) 555 B) 1111 C) 2222 **D) 4000**

Q. 42. Oleocellosis is physiological disorder of:

- A) Sweet lime B) Grapefruit C) Mandarin **D) Lemon**

Q. 43. Pink disease in jackfruit is caused by:

- A) Botryobasidium** B) Colletotricum C) Rhizopus artocarp D) Diplodia

44. Somaclonal variation in fruit crop is permitted upto:

- A) 1% B) 3-4% C) 5-6% D) 8-10%

Q. 45. Match the following according to their chilling hours requirement:

- | | |
|----------------------|----------|
| A) Peach | 900-1100 |
| B) Subtropical peach | 250-500 |
| C) Asian Pear | 500-900 |
| D) Apple | 400-600 |

Ans: a-iii b-ii c-iv d-i

Q. 46. Asepsis means?

- | | |
|--|----------------------------|
| A) Preservation by high temperature | B) Inactivation of Enzymes |
| C) Keeping out the Microorganisms | D) Free from moisture |

Q. 47. Owens (2008) has divided the grape genotype into how many morphotypes?

- | | | | |
|-------------|------|------|------|
| A) 2 | B) 3 | C) 4 | D) 5 |
|-------------|------|------|------|

Q. 48. In mango stigma receptivity of flowers continues in upto:

- | | | | |
|-------------|-------------|----------------------------|----------------------|
| A) 24 hours | B) 48 hours | C) 72 hours or more | D) more than 10 days |
|-------------|-------------|----------------------------|----------------------|

Q. 49. Effective pollination period (days) of litchi varieties in North India:

- | | | | |
|-------------|---------------------|---------------|-------------|
| A) 4-6 days | B) 7-18 days | C) 20-25 days | D) 0-4 days |
|-------------|---------------------|---------------|-------------|

Q. 50. *Psidium cujavalis* guava is having growing habit:

- | | | | |
|----------|--------------------|---------------|------------------|
| A) Dwarf | B) Vigorous | C) Semi-dwarf | D) Semi vigorous |
|----------|--------------------|---------------|------------------|

Q. 51. Gisela-5 rootstock of Cherry is:

- | | | | |
|-------------|------------------|---------------|-----------------|
| A) Vigorous | B) Semi vigorous | C) Semi-dwarf | D) Dwarf |
|-------------|------------------|---------------|-----------------|

Q. 52. Black heart and brown spot of pineapple is caused when the storage temperature is below:

- | | | | |
|---------|---------|----------------|---------|
| A) 1 °C | B) 5 °C | C) 7 °C | D) 8 °C |
|---------|---------|----------------|---------|

Q. 53. Intense yellow along with purple coloration on leaf is seen due to deficiency of:

- A) Mo B) Mg **C) P** D) Zn

Q. 54. In Banana under protected cultivation which physiological disorder affects growth:

- A) Choke throat B) Russeting C) Albinism **D) Lanky plants**

Q. 55. Papain quality is measured through:

- A) SPI Test B) Leucine Test **C) Tyrosine Unit Test** D) LEIA test

Q. 56. In Banana *M. balbisiana* x *M. acuminata* scoring is?

- A) 26-69** B) 15-25 C) 70-75 D) 63-69

Q. 57. Apple pollinizer recommended for Himachal Pradesh:

- A) Tydeman Early, Worcester, Golden Delicious and Top Red
B) Tydeman Early, Worcester, Golden Delicious, Red Gold
C) Yellow Newton, Red gold and Skyline Supreme
D) Worcester, Tydeman Early, Red Elstar

Q. 58. Only variety of mango in which Kesar is used as one of the hybrid parent:

- A) Jawahar B) PKM-1 C) PKM-2 **D) Sai Sugandha**

Q. 59. System of 3 to 4 lateral branch replacement pruning is practiced in:

- A) Apple **B) Kiwifruit** C) Persimmon D) Passion Fruit

60. In Protected cultivation of strawberry the provided growing liquid medium should have pH:

- A) 6.5 B) 5.5 **C) 5.7** D) 7.0

61. Stanley spot in plum during pre-harvest stage at tree is due to:

- A) High humidity B) Low temperature **C) High temperature** D) Low humidity

62. Most of the Cornell Geneva series rootstock of apple are mainly resistant to:

- A) Codling moth B) Wooly apple aphid **C) Fire blight disease** D) Drought

Q. 63. Principle lipids in avocado is:

- A) Oleic and Palmitic** B) Oleic and Stearic C) Oleic and Linoleic D) Linoleic and Palmitic

Q. 64. Super Nova is a mutant variety of:

- A) Almond** B) Walnut C) Apricot D) Cashew Nut

Q. 65. Most productive training system of walnut is:

- A) Open vase system B) Tatura trellis system
C) Modified Leader System D) Central leader system

Q. 66. Genomic constitution of Kunnan variety of banana is:

- A) AAB B) AA **C) AB** D) AAA

Q. 67. Fastrack breeding first time use in which fruit crop?

- A) Peach B) Cherry **C) Plum** D) Pear

Q. 68. Best maturity indices for fruit harvest in pineapple is:

- A) TSS 10° Brix **B) Specific gravity 0.98 to 1.2** C) TSS 11° Brix D) TSS and Acid 0.1 to 1 %

Q. 69. Optimum photosynthetic light requirement for papaya cultivation:

- A) 1800-1900 $\mu\text{mol m}^{-2} \text{s}^{-1}$** B) 750-1,000 $\mu\text{mol m}^{-2} \text{s}^{-1}$
C) 1100 $\mu\text{mol m}^{-2} \text{s}^{-1}$ D) 1300 $\mu\text{mol m}^{-2} \text{s}^{-1}$

Q. 70. Match the following according to their optimum light saturation point ($\mu\text{mol m}^{-2} \text{s}^{-1}$) requirement

- A) Apple i) 1300 $\mu\text{mol m}^{-2} \text{s}^{-1}$
B) Pecan ii) 1100 $\mu\text{mol m}^{-2} \text{s}^{-1}$

- C) Fig iii) 1800-1900 $\mu\text{mol m}^{-2} \text{s}^{-1}$
D) Peach iv) 700-800 $\mu\text{mol m}^{-2} \text{s}^{-1}$

Answer – A-iii, B-iv, C-ii and D-i

Q. 71. Solar light for better plant growth are desirable where the particles size are in the range of:

- A) 10-15 nm B) 50-100 nm **C) 100-150 nm** d) 200-250 nm

72. Self-Incompatibility in citrus has been decipherable in Xiagunshui lemon first time developed through?

- A) Cisgenesis B) Invitro mutagenesis C) Hybridization **D) RNA Sequencing**

73. Dr. Abhay Dandekar is related to breeding of which fruit crop?

- A) Walnut** B) Apple C) Plum D) Peach

Q. 74. 1st Indian variety develop through *in ovulo* embryo rescue technique?

- A) Flame Seedless B) Punjab Purple
- C) Pusa Purple Seedless D) Thompson Seedless

Q. 75. In apple the bark and bud tolerant to the low temperature by:

- A) Super cooling
B) Prevent intra-cellular ice formation
C) Acclimatization
D) Freezing tolerance

Q. 76. What is the cross of Vengurla – 6 hybrid of Cashew nut:

- A) Ansur Early x Mysore Kotekar
B) Vetore 56 x Ansur-1
C) Vengurla 3 x M 10
D) BLA-139-1 x K30-1

Q. 77. Which of the following grape variety is not recommended to the trained in bower system:

- A) Syrah B) Thompson Seedless **C) Perlette** D) Flame Seedless

Q.78. In summer ovule longevity is shorter following a heavy crop year which may be prolonged in certain cases by application of:

A) N B) Zn C) Fe D) P

Q.79. Polyembryony is first time discovered by:

A) **Leuwenhoek** B) Stout C) Bergh D) Nirody

Q.80. Stamen's abortion and subsequent poor fruit set may occur in strawberry when light intensity drops to a level of:

A) **4400 MW/ m²** B) 6500 MW/ m² C) 7000 MW/ m² D) 8000 MW/m²

Q.82. Paclobutrazol is the most popular growth retardant used in production altars:

A) **MAV- pathway** B) Photosystem –II C) Anaerobic pathway D) Auxin – biosynthesis

Q.83. Gouging is a cultural operation practiced in which fruit crop?

A) **Banana** B) Pineapple C) Strawberry D) Date palm

Q.84. Prunes botanically belongs to:

A) ***Prunus domestica*** B) *Prunus misa* C) *Prunus armainiaca* D *Prunus salicina*

Q.85. Which of the following avocado variety is developed through hybridization:

A) Hass B) Pollock **C) Fuerte** D) Waldin

Q.86. Pione-a Tetraploid grape is commercially cultivated in

A) Spain B) Italy C) USA **D) Japan**

Q.87. Banana multiple crossing variety:

A) Udhayam **B) CO-1** C) CO-2 D) CO-3

Q.88. The duration of flower initiation to anthesis in mango under tropical condition:

A) 1 week B) 2 week C) 3 week **D) 4 week**

Q.89. Transgenic F₁ papaya is:

- A) T.N. No. 1 **B) Rainbow** C) Sunset Solo D) Sunup

Q.90. Which rootstock of mango enhance resistance to fruit fly by increasing firmness:

- A) Piqueno B) *Mangifera kasturi* **C) Criollo** D) Hilacha

Q.91. Grape rootstock has been evolved using highest no. of donor parent:

- A) 41 B B) 1103 Paulsen **C) Fercal** D) Freedom

Q.92. Biotic stress has been introduced to India through OGV in grape powdery mildew from EU:

- A) GFLY virus** B) Viroid's & Phytoplasma C) Bacterial Spot D) Fungus (PM)

Q.93. Powdery Mildew Resistant Loci Ren-6 and Ren-7 are located on chromosome no.:

- A) 2 and 3 B) 6 and 7 C) 14 and 18 **D) 9 and 19**

Q.94. Case variety of grape has ploidy level:

- A) 2X B) 3X **C) 4X** D) 6X

Q.95. For colorless in fruits which pigment is responsible...:

- A) Anthocyanin **B) Flavanols** C) Proanthocyanin D) Carotenoids

Q.96. The International Treaty on Plant Genetics Resources for Food and Agriculture was sign in...:

- A) 2002** B) 2005 C) 2007 D) 2020

Q.97. The base temperature for calculation of Growing Degree Days (GDH) in Fruit Crops...:

- A) 2.2 °C B) 4.4 °C C) 5.5 °C **D) 7 °C**

Q.98. Which fruit is rich in pectin:

- A) Almond B) Cashew Apple **C) Apple** D) Walnut

Q. 99. The technology to distinguish zygotic and nucellar polyembryony in citrus species was first time reported using:

- A) RFLP B) RAPD **C) Isozymes** D) AFLP

Q. 100. Notching is an important practice of which fruit crop:

- A) Aonla B) Walnut **C) Fig** D) Banana

Q. 101. Which hormone is use to improve fruit setting:

- A) Ethylene B) ABA **C) NAA** D) Salicylic acid

Q. 102. Arka Neelachal Kesari mango is a clonal selection of which variety:

- A) Suwernarekha B) Sindhuri **C) Gulabkhas** D) Lal Sindhuari

Q. 103. Pectin is present in fruits in the form of:

- A) Protopectin B) Pectin C) Pectic acid **D) Calcium pectate**

Q. 104. Best Degreening temperature and relative humidity for citrus is:

- A) 27°C and 85-95% RH** B) 17°C and 85-95% RH
C) 7°C and 85-95% RH D) 37°C and 85-95% RH

Q. 105. Browning of peel followed by internal pulp browning in apple during storage due to:

- A) High ethylene **B) Accumulation of hydrocarbons** C) High temperature D) Enzymatic reaction

Q. 106. Cheapest method of preservation is:

- A) Canning B) Sterilization **C) Drying** D) Freezing

Q.107. Dwarfness in Mango is controlled by which gene:

- A) Single dominant gene **B) Single recessive gene**
C) Poly genes D) Under cytoplasmic control

Q. 117. is a first hybrid variety of pineapple developed in India:

- A) Kew **B) Amritha** C) Mauritius D) Boron

Q. 118. Enzyme responsible for loss of tissue firmness in fruits during ripening is:

- A) Hydrolyses B) Catalyzes **C) Polygalacturonase** D) Pectinesterases

Q. 119. Whole genome sequencing in pomegranate has been reported in which variety:

- A) Ganesh B) Mridula **C) Bhagwa** D) Spanish Ruby

Q. 120. Flavoring compound in strawberry is:

- A) Methyl esterase B) Isoamyl acetate **C) Ethyl butanoate** D) 3-hexenal

Q. 121. Headquarter of UPOV is situated at:

- A) Rome B) Washington, DC **C) Geneva** D) Germany

Q. 122. Somatic chromosome no. of Illaichi variety of Ber is:

- A) $2x = 24$ B) $4x = 48$ C) $6x = 72$ **D) $8x = 96$**

Q. 123. Miracle fruit of China is:

- A) Litchi B) Kinnow **C) Kiwifruit** D) Strawberry

Q. 124. Which species of kiwifruit is cold tolerant and suitable for interspecific hybridization:

- A) *A. delicious* **B) *A. chinensis*** C) *A. arguata* D) ***A. kolomikta***

Q. 125. Compound can be used in *In vitro* ploidy manipulation is:

- A) Oryzalin** B) trifluralin C) APM D) DMSO

Q. 126. Summer pruning in ber is done in which month:

- A) March B) April **C) May** D) June

Q. 127. International Biodiversity Day is celebrated on:

- A) 22 March B) 22 April **C) 22 May** D) 22 June

Q. 128. Bio fortified variety of pomegranate Solapur Lal has the parentage of:

- A) Bhagwa x Jyoti B) Ganesh x Nana
C) Bhagwa x Gulesha Red **D) Bhagwa x (Ganesh x Nana) x Daru**

Q. 129. Technique of obtain viable seed in interspecific hybridization in papaya

- A) Endosperm culture **B) Embryo Rescue**
C) *In vitro* mutagenesis D) Haploid production

Q. 130. On the basis of respiration rate apple is classified as:

- A) Low** B) Very Low C) Moderate D) High

Q. 131. The nutrient works only act as catalyst:

- A) Cu** B) B C) Zn D) Mo

Q. 132. Largest *invitro* collection of *Musa* germplasm in the world is maintained by:

- A) INIBAP B) IITA **C) ITC** D) CGIAR

Q. 133. During summer pruning when temperature is exposed to above 30 °C in grapes

- A) Bud differentiation **B) Dead-arms** C) Flowering D) Growth cease

Q. 134. Variety of grape which forms inverted bottleneck formation when grafted on Dogridge rootstock:

- A) Thompson Seedless** B) Perlette C) Anab-e-Shahi D) Beauty Seedless

Q. 135. Ronnse, Kryder, Pomeroy and Large flower are the botanical cultivars of:

- A) *Citrus macrophylla* **B) *Poncirus trifoliata*** C) *Severinia buxifolia* D) *C. jambhiri*

Q. 136. Recently matted row system of planting is commercially followed in:

- A) Pineapple B) Kiwifruit **C) Strawberry** D) Apple

Q. 137 . Match the following training systems according to their originated countries

- | | |
|-------------------|---------------|
| A) Cordon | i) France |
| B) Meadow | ii) Israel |
| C) Spindle Bush | iii) Germany |
| D) Tatura Trellis | iv) Australia |

Ans: i), ii), iii), iv

Q 138) In Robusta banana paired row planting system (1.5x1.5x2.0m) recorded a total yield of:

- A) 43.10 t/ha B) 52 t/ha C) 58.08 t/ha **D) 65.91 tonnes/ha**

Q. 139 Reflective mulches do improve the light level in the portion.

- A) Lower canopy** B) Middle canopy
C) Inside middle canopy D) Upper canopy

Q. 140 Banana species having centre of diversity in eastern India is:

- A) *Musa balbisiana*** B) *M. acuminata* C) *M. basjoo* D) *M. ingens*

Q. 141 Owens has classified grape into how many morphotypes:

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

Q. 142 In hilly areas fruit cultivation is not possible above the slope.

- A) 40 °** B) 52° C) 55° D) 65°

Q. 143 Under the protected cultivation tip burning in banana is due to:

- A) High temperature** B) Low temperature C) High humidity D) Low humidity

Q. 144 Match the column:

Fruit crop	Mean temperature for growth
a Apple	i) 20 °C
b Mango	ii) 30 °C
c Banana	iii) 27 °C
d Persimmon	iv) 24 °C

Ans a-i b-ii c-iii d-iv

Q. 145 Embryo rescue in fruit crops first time successfully done by:

A) Hanning **B) Tokey** C) Theophrastus D) Willey

Q. 146 Aroma in over-ripe banana is due to:

A) Eugenol B) Hexenal **C) Isopentanol** D) Valencene

Q. 146 India's first nectarine variety was released from which institute:

A) PAU, Ludhiana B) ICAR, IARI C) CITH Station Mukteshwar D) IARI, Shimla

Note: Answer not found

Q. 147 Match the column on light requirement for photosynthesis:

A) Apple
B) Pecan nut
C) Fig
D) Mango

Note: Not found

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