



## BRAINWARE UNIVERSITY

Term End Examination 2023-2024

Programme – B.Sc.(Ag)-Hons-2022

Course Name – Production Technology for Fruit and Plantation Crops

Course Code - CC-BAG474(T)

( Semester IV )

Full Marks : 50

Time : 2:0 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

### Group-A

(Multiple Choice Type Question)

1 x 20=20

1. Choose the correct alternative from the following :

- (i) Select the seedless variety of mango from the given options below.
- |           |             |
|-----------|-------------|
| a) Sindhu | b) Ratna    |
| c) Mulgoa | d) Amrapali |
- (ii) Identify the suitable mango variety which is suitable for HDP planting.
- |           |             |
|-----------|-------------|
| a) Sindhu | b) Ratna    |
| c) Mulgoa | d) Amrapali |
- (iii) Choose the training method which is followed in High Density Planting (HDP).
- |                    |                   |
|--------------------|-------------------|
| a) Open Center     | b) Central Leader |
| c) Modified Center | d) None of these  |
- (iv) Choose the cause of spongy tissue (an important physiological disorder of mango)
- |  |                                |
|--|--------------------------------|
| a) Imbalance in calcium concentration                  | b) High level of soil nitrogen |
| c) Heat in mature fruit at pre-and post-harvest stages | d) None of these               |
- (v) Choose the actual Indian city where National Research Centre (NRC) for Citrus is located.
- |            |            |
|------------|------------|
| a) Nagpur  | b) Shilong |
| c) Kolkata | d) Mumbai  |
- (vi) Choose the malformation free variety of mango from the given options below.
- |              |           |
|--------------|-----------|
| a) Bahaduran | b) Neelam |
| c) Alphanso  | d) Ratna  |
- (vii) Select the actual abnormalities in plants which are associated to non-pathogenic factors.
- |              |                           |
|--------------|---------------------------|
| a) Disease   | b) Physiological disorder |
| c) Infection | d) All of these           |
- (viii) Illustrate the control measure (s) to overcome the spongy tissue problem in mango.
- |                |             |
|----------------|-------------|
| a) Sod Culture | b) Mulching |
|----------------|-------------|

- c) Harvesting the fruits at 3/4th maturity
- (ix) Choose the correct fact about jhumka (a physiological disorder) in mango.
- a) Breakdown of the pulp on the ventral side and towards the apex
- b) Development of small, etiolated area at the distal end of the fruit
- c) Intensification of normal green colour
- d) Formation of a bunch of fruitlets at the tip of panicles
- (x) Choose the correct fact about Black Tip (a physiological disorder) in mango
- a) Breakdown of the pulp on the ventral side and towards the apex
- b) Development of small, etiolated area at the distal end of the fruit
- c) Intensification of normal green colour
- d) Formation of a bunch of fruitlets at the tip of panicles
- (xi) Choose the correct fact about Soft Nose (a physiological disorder) in mango.
- a) Breakdown of the pulp on the ventral side and towards the apex
- b) Development of small, etiolated area at the distal end of the fruit
- c) Intensification of normal green colour
- d) Formation of a bunch of fruitlets at the tip of panicles
- (xii) Select the actual symptom of reproductive malformation in mango.
- a) Compactness of panicle
- b) Reduced length of petiole
- c) Shortening of internodal length
- d) Bunching of mango leaves at terminal portion of leaf
- (xiii) Choose the actual symptom of vegetative malformation in mango.
- a) Reduced length of petiole
- b) Shortening of internodal length
- c) Bunching of mango leaves at terminal portion of leaf
- d) All of these
- (xiv) Spraying of NAA@ 200-300 PPM during november in mango is done to solve the problem of which disorder of the followings?
- a) Jhumka
- b) Soft Nose
- c) Spongy Tissue
- d) Black Tip
- (xv) Illustrate the actual cause of black tip in mango.
- a) Convective heat arising from soil
- b) Presence of brick kilns within 1 km of mango orchard
- c) Improper level of calcium in plant
- d) Lack of adequate pollination and fertilization
- (xvi) Choose the actual cause of spongy tissue in mango.
- a) Convective heat arising from soil
- b) Presence of Brick Kilns within 1 km of mango orchard
- c) Improper level of calcium in plant
- d) Lack of adequate pollination and fertilization
- (xvii) Summarize the arrangement of leaves on a stem or branch.
- a) Venation
- b) Vernation
- c) Modification
- d) Phyllotaxy
- (xviii) First few leaves on a stem which are different from other leaves are summarized as:
- a) Prophylls
- b) Cataphylls
- c) Hypsophylls
- d) Sporophylls
- (xix) Leaves bearing floral buds in their axis are special leaves summarized as:
- a) Prophylls
- b) Cataphylls
- c) Hypsophylls
- d) Sporophylls
- (xx) Arrangement of petals/sepals in a floral bud is summarized as:
- a) Venation
- b) Vernation
- c) Modification
- d) Phyllotaxy

(Short Answer Type Questions)

2.5 x  
10=25

2. Identify the taxonomic description of mango. (2.5)
3. Discuss some Polyembryonic varieties of mango in India. (2.5)
4. Discuss some rootstocks of mango. (2.5)
5. Choose some points to solve the problem of biennial bearing in mango. (2.5)
6. Explain the process of Denavelling in banana. (2.5)
7. Illustrate the economic importance of Plantation Crops in India. (2.5)
8. Explain the term- Cashew Nut shell liquid (CNSL). (2.5)
9. Discuss about the control measures which should be followed to solve the problem of alternate or, biennial bearing in mango plant. (2.5)
10. Discuss the Differences between Assam tea vs China tea. (2.5)
11. Predict the best Bahar technique of guava. (2.5)

**OR**

Discuss about the various categories of mango cultivars based on time of ripening. (2.5)

**Group-C**

(Long Answer Type Questions)

5 x 1=5

12. Discuss about the effective control measures to overcome the problem of Black tip and spongy tissue of mango. (5)

**OR**

Elaborate the different types of vegetative propagation (asexual propagation) followed in mango. (5)

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