

C 60157

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Name.....

Reg. No.....

SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, MARCH 2019

(CUCBCSS)

Food Technology

FTL 6B 18—TECHNOLOGY OF FRUITS AND VEGETABLES

Maximum : 80 Marks

Time : Three Hours

Part A (Objective Type Questions)

I. Choose the appropriate answer :

1 Following fruit is non-climacteric in nature :

- | | |
|-----------------------|--------------------|
| (a) Grape. | (b) Mango. |
| (c) Both (a) and (b). | (d) None of these. |

2 Best storage temperature for Apple is :

- | | |
|----------------------------------|----------------------------------|
| (a) $1 \pm 1^{\circ}\text{C}$. | (b) $8 \pm 1^{\circ}\text{C}$. |
| (c) $12 \pm 1^{\circ}\text{C}$. | (d) $18 \pm 1^{\circ}\text{C}$. |

3 Major composition of organic acid present in grape is :

- | | |
|--------------------|-------------------|
| (a) Tartaric acid. | (b) Citric acid. |
| (c) Malic acid. | (d) All of these. |

4 Best storage temperature for Fig. is :

- | | |
|----------------------------------|----------------------------------|
| (a) $1 \pm 1^{\circ}\text{C}$. | (b) $8 \pm 1^{\circ}\text{C}$. |
| (c) $12 \pm 1^{\circ}\text{C}$. | (d) $18 \pm 1^{\circ}\text{C}$. |

5 Protham is used as antisprouting chemical agent for :

- | | |
|-----------------------|-------------|
| (a) Fruits. | (b) Onions. |
| (c) Other vegetables. | (d) Potato. |

6 Maleic hydrazide is used as effective preharvest treatment in sprout control of :

- | | |
|-----------------|--------------|
| (a) Fruits. | (b) Flowers. |
| (c) Vegetables. | (d) Onions. |

Turn over

7 Richest source of Ascorbic acid among the fruits :

- (a) Guava.
- (b) Amla.
- (c) None.
- (d) (a) and (b).

8 Factors affecting Fruit respiration :

- (a) Stage of maturity.
- (b) Temperature R.H.
- (c) Fruit type and variety.
- (d) Amount of heat generated.
- (e) All of the above.

9 Best example for leaves used as vegetable :

- (a) Spinach.
- (b) Coriander.
- (c) Mentha.
- (d) All of these.

10 Flower part of the plant used as vegetable :

- (a) Broccoli.
- (b) Coriander.
- (c) Cauliflower.
- (d) (a) and (c).

(10 × 1 = 10 marks)

Part B (Short Answers)

II. Answer any *five* of the following :

- 11 Ideal storage temperature for Subtropical fruits is _____ °C.
- 12 Equipment used to measure the fruit texture is _____.
- 13 For measurement of tenderness in vegetables like peas, the tool used is _____.
- 14 To measure the acid content of the fruits, the method used is _____.
- 15 TSS/Acid ratio is the most reliable maturity index for fruits like _____ berries.
- 16 The Test used to show starch content in fruits, that develops blue colour is _____.
- 17 To measure the astringency/tannin content in fruits like dates, the test used is _____.

(5 × 2 = 10 marks)

Part C (Short Essays)

III. Answer any *six* of the following :

- 18 Define MAP and CA Storage system. Differentiate MAP and CA Storage system. What are the advantages of Active MA packaging over passive MA packaging ?

- 19 Differentiate Climacteric type and non-climacteric type of fruits with one example for each. Why Climacteric type of fruits have better scope than non-climacteric type of fruits ?
- 20 Write about natural and artificial methods of fruit ripening, their merits and demerits.
- 21 Define Fruit ripening. Write briefly about the physico-chemical and physiological changes associated with fruit ripening process.
- 22 What are the factors responsible for postharvest losses in horticultural crops and What are the improved postharvest handling methods that minimizes these losses in India ?
- 23 Explain the important properties of pectin. Distinguish the powder pectin and liquid pectin with one example for each. Advantages of powder pectin over liquid pectin.
- 24 What do you mean by crystallization in jam production and what are the measures to overcome this problem ?
- 25 Explain in detail the spoilages in canned foods due to physical and chemical changes.

(6 × 5 = 30 marks)

Part D (Essays)

IV. Answer any two of the following :

- 26 The principle of canning and describe in detail the various unit of operations involved in canning of fruits. Describe the non-destructive testing method for defected cans.
- 27 Explain in detail the concept of hurdle technology as applied to the preparation of fruit concentrates.
- 28 Explain in detail the concept of hurdle technology as applied to the preparation of fruit powders.
- 29 Explain in detail the concept of hurdle technology as applied to the preparation of fruit jam preparation.

(2 × 15 = 30 marks)