

SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, MARCH 2017

(CUCBCSS—UG)

Food Technology

FTL 6B 18—TECHNOLOGY OF FRUITS AND VEGETABLES

Time : Three Hours

Maximum : 80 Marks

Part A (Objective Type Questions)

I. Choose the appropriate answer :

- 1 The stem part of the plant used as vegetable.
(a) Onions. (b) Potatoes.
(c) Rhizomes. (d) All of these.
- 2 The root part of the plant used as vegetable.
(a) Beetroot (b) Radish.
(c) Carrot. (d) Sweet potato.
(e) All of these.
- 3 Dried Silks, immature kernels, milky, when kernels squeezed are maturity indices for :
(a) Long beans. (b) Field beans.
(c) Kidney beans. (d) Sweet corn.
- 4 The roots of the following vegetable attain adequate size with uniform tapering is maturity indices for :
(a) Cabbage. (b) Radish.
(c) Carrot. (d) None of these.
- 5 A vegetable with immature seeds, with glossy skin, harvested, 55-60 days from flowering, before seeds fully matures.
(a) Cucumber. (b) Gherkins.
(c) Both of these. (d) None of these.
- 6 These are bulbs on maturity, well filled bulbs, tops dry down, undercut bulbs and cure.
(a) Onion. (b) Shallots.
(c) Garlic. (d) None of these.

Turn over

- 7 These are vegetables, attain maturity in 8-9 months after planting, gives maxi root yield.
- (a) Onion. (b) Shallots.
(c) Garlic. (d) Ginger.
- 8 The vegetable is harvested when they are immature, glossy skin, 40 days from flowering, before seeds fully mature.
- (a) Okra (Lady's fingers). (b) Shallots.
(c) Brinjal (Eggplant). (d) Ginger.
- 9 The vegetable is harvested, when well developed pods are matured with seeds in 4-7 days after flower has opened, 2-4" long length.
- (a) Okra (Lady's fingers). (b) Brinjal (Eggplant).
(c) Onion. (d) Ginger.
- 10 Best example for Climacteric type of fruit is :
- (a) Banana. (b) Pomegranate.
(c) Citrus. (d) Grapes.

(10 × 1 = 10 marks)

Part B (Short Answers)II. Answer any *five* of the following :—

- 11 Specific gravity and full cheeks are the reliable maturity indices of _____.
- 12 Disappearance of angularity is the one of the maturity indices of _____.
- 13 Tenderness is the maturity index for _____ vegetable.
- 14 Compactness of florets is the reliable maturity index of _____ vegetable.
- 15 Changes in oil content is the reliable maturity index in _____ fruit.
- 16 Astringency in terms of Tannin content is the maturity index of _____ fruit.
- 17 Changes in sugar to acid ratio is a reliable index for _____ fruit.

(5 × 2 = 10 marks)

Part C (Short Essays)

III. Answer any six of the following :—

- 18 Explain in detail the spoilages of canned foods due to physical and chemical changes.
- 19 What do you mean by crystallization in jam production and what are the measures to overcome this problem ?
- 20 Describe the factors affecting the quality and safety of canned products. Why do the non acidic vegetables require severe sterilization during canning than the fruits ?
- 21 What are the advantages of continuous agitating type of cookers over other types of cookers.
- 22 What is lacquering ? Why the sulphur resistant lacquer coated cans are only used for non acid food products ?
- 23 Explain how do you test the defected cans. Explain why the cans after processing are cooled rapidly to 39°C ?
- 24 Describe the factors controlling the strength of pectin jellies. Describe the methods of determining the pectin content of fruit juices.
- 25 Describe black neck formation in tomato ketchup and methods to prevent it.

(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. It's advantages over other preservation methods.
- 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)