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**B. Tech.**

**(SEM V) THEORY EXAMINATION 2017-18**

**FRUITS, VEGETABLES & PLANTATION PRODUCTS**

*Time: 3 Hours*

*Total Marks: 100*

**Note:** Attempt all Sections. If require any missing data; then choose suitably.

**SECTION A**

**1. Attempt *all* questions in brief.**

**2 x 10 = 20**

- a. Differentiate Between Fruits & Vegetables.
- b. Give the importance of blanching?
- c. Which instrument is used for determination of °Brix of sugar syrup?
- d. What are glazed fruits?
- e. What is CNSL?
- f. List out major and minor spices of India?
- g. What is CTC in tea processing?
- h. Draw the structure of coffee cherry.
- i. Give the chemical composition of cocoa bean?
- j. Differentiate between milk chocolate and dark chocolate?

**SECTION B**

**2. Attempt any *three* of the following:**

**10 x 3 = 30**

- a. Comment on the structural, compositional and nutritive aspects of fresh fruits and vegetables.
- b. Discuss the causes for deterioration of fruit juices. Also discuss the various methods for preservation of fruit juices.
- c. What do you understand by cryogenic grinding of spices? Also discuss its advantages over traditional grinding.
- d. Give the classification of commercial tea and discuss the manufacturing of Black Tea with the significance of each step.
- e. Discuss about the basic ingredients that are used in chocolate manufacturing. Also explain refining and conching in its manufacturing.

**SECTION C**

**3. Attempt any *one* part of the following:**

**10 x 1 = 10**

- a. Discuss the physiological development of fruits and vegetables.
- b. Write a precise note on post-harvest handling of fruits and vegetables.

- 4. Attempt any *one* part of the following: **10 x 1 = 10****
- a. Differentiate between hot pulping and cold pulping of tomato. Also discuss the method of preparation of tomato ketchup.
  - b. Write a precise note on preserves, candies and crystallized fruits.
- 5. Attempt any *one* part of the following: **10 x 1 = 10****
- a. Differentiate between Spice Oils and Oleoresins. Also discuss their manufacturing process.
  - b. Discuss in detail the processing of cashew nut with significance of each step.
- 6. Attempt any *one* part of the following: **10 x 1 = 10****
- a. Explain the different parts of 'coffee cherry'. Describe the processing of coffee cherries by dry method to obtain coffee beans.
  - b. Discuss the process of manufacturing of decaffeinated coffee. Also comment on use of chicory in coffee.
- 7. Attempt any *one* part of the following: **10 x 1 = 10****
- a. Enlist the different steps involved in the processing of cocoa beans. Also discuss the importance and method of fermentation and roasting of cocoa beans.
  - b. Write an explanatory note on Defects in Chocolate.