



**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**

**M.Sc. DEGREE EXAMINATION – FOOD CHEMISTRY AND FOOD PROCESSING**

**THIRD SEMESTER – NOVEMBER 2019**

**18PFP3MC03 – PLANT PRODUCT PROCESSING**

Date: 02-11-2019

Dept. No.

Max. : 100 Marks

Time: 09:00-12:00

**Part A**

**Answer ALL the questions.**

**(10 x 3 = 30 marks)**

1. Differentiate imbibition and diffusion in sugarcane juice extraction.
2. What is the importance of conching and tempering in chocolate manufacture?
3. Write a note on break roll and reduction roll of milling process.
4. What are textured vegetable proteins? Highlight their nutritional significance.
5. What determines the strength of pectin jellies?
6. Mention the permitted amount of TSS excluding the sugar content and acidity in thermally processed fruit pulp according to FSSAI regulation.
7. List the factors leading to auto oxidation of oils.
8. Which vegetable oil is considered the best for baking industry? Justify your answer.
9. What are the colour changes that occur during the fermentation of cacao beans?
10. Give a brief account on puffed rice.

**Part B**

**Answer ALL the questions.**

**(5 x 8 = 40 marks)**

11. a. What are the significant changes that occur during the fermentation process of cacao beans?

**OR**

b. Give the nutritional composition of cacao beans. Give a flowchart to illustrate the processing of cacao bean from the field to the sack.

12. a. Explain the production of protein concentrates and isolates.

**OR**

b. Briefly discuss the structure and composition of pulses.

13. a. Discuss the efficacy of the milling process of cereal grains.

**OR**

b. Explain the processing of byproducts from corn milling and give their uses in cooking.

14. a. Write short notes on postharvest changes in fruits and vegetables and bring out the role of ethylene in fruit ripening.

**OR**

- b. Draw and explain the processing of a mixed fruit jam.
15. a. Explain the role of chemical adjuncts in food industry.

**OR**

- b. Draw and explain the processing flow chart of a shortening.

**Part C**

**Answer ANY TWO questions.**

**(2 x 15 = 30 marks)**

16. Enumerate the chocolate making process with a suitable flow chart.
17. Write short notes on the following
- a. Refining of vegetable oils (7 ½ marks)      b. Milling of sugarcane (7 ½ marks)
18. Describe the various processing and preservation techniques adopted in fruit and vegetable industry.
19. Discuss in detail the rice milling technology and its byproducts utilization.

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