



# LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

**SECOND SEMESTER – APRIL 2023**

**PFP2MC03 – PLANT PRODUCT PROCESSING**

Date: 06-05-2023

Dept. No.

Max. : 100 Marks

Time: 01:00 PM - 04:00 PM

## SECTION A – K1 (CO1)

**Answer ALL the questions**

**(5 x 1 = 5)**

1. **True or False**

a) Nixtamalisation is a processing technique applied in rice.

b) Some proteins are complexed with carbohydrates and carbohydrate moiety has negative impact on the digestibility of protein

c) Germinating, soaking, boiling, and autoclaving the pulses prevents flatulence-causing oligosaccharides.

d) The most commonly utilised packing materials for flexible packaging aids in oils are HDPE, Tin, Glass, and PET.

e) Plantation crop refers to a polyculture crop.

## SECTION A – K2 (CO1)

**Answer ALL the questions**

**(5 x 1 = 5)**

2. **Definitions**

a) Parboiling

b) Temperature controlled transportation

c) Non starch polysaccharides

d) Fat substitutes

e) Malting

## SECTION B – K3 (CO2)

**Answer any THREE of the following in 300 words**

**(3 x 10 = 30)**

3. Illustrate the modern milling operation of a wheat grain with a suitable flowchart.

4. Explain the processing operations carried out in puffed, parched and parboiled rice.

5. Use the appropriate milling procedures while processing toor dhal.

6. Carry out quality control - process and product certification procedures for fruits and vegetables.

7. Provide a sketch of the sources, nutritional composition, and properties of plant based oils.

## SECTION C – K4 (CO3)

**Answer any TWO of the following in 500 words**

**(2 x 12.5 = 25)**

8. Categorise the different stages of sugar cookery with suitable examples.

9. Explain the basic classification of spices with examples and highlight the functional and health properties.

10. Examine the starch, fibres, and non-starch polysaccharides found in pulses and legumes.

11. Compare ethylene technology with irradiation approaches for processing fruits.

**SECTION D – K5 (CO4)**

**Answer any ONE of the following in 750 words (1 x 15 = 15)**

12. Summarize the basic milling operation of a rice grain. Highlight the parboiling technique of rice and its advantages.
13. Explain the quality requirements for pulses, oilseeds, and fruits.

**SECTION E – K6 (CO5)**

**Answer any ONE of the following in 1000 words (1 x 20 = 20)**

14. Describe the journey of sugar from the land to the table.
15. i) Explain the packaging of edible oils. (10)  
ii) Explore fruit and vegetable processing and preservation strategies.(10)

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