



# LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

**M.Sc. DEGREE EXAMINATION – BIOTECHNOLOGY**

**THIRD SEMESTER – NOVEMBER 2023**

**PBT3ID01 – PRINCIPLES OF FOOD PROCESSING**

Date: 09-11-2023

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 Choose the best answer**

- a) The ideal moisture content for long term storage of rice is  
i) 12%                      ii) 14%                      iii) 10%                      iv) 6%
- b) The millet variety with highest nutritional protein content is  
i) Foxtail millet                      ii) Finger millet                      iii) Pearl millet                      iv) Proso millet
- c) Fruits and vegetables contain a natural enzyme known as \_\_\_\_\_  
i) Pectin                      ii) Pectin methyl esterase                      iii) Amylase                      iv) Lipase
- d) Perimysium in muscle fiber is also called as \_\_\_\_\_  
i) myofibril                      ii) endomysium                      iii) 2° bundle                      iv) 1° bundle
- e) The egg shell is composed of \_\_\_\_\_  
i) Calcium carbonate                      ii) Magnesium                      iii) Yolk                      iv) Albumen

## SECTION A – K2 (CO1)

**Answer ALL the questions**

**(5 x 1 = 5)**

**2 Answer all in one or two sentences**

- a) Define humectants with an example.
- b) Define relative humidity.
- c) Expand HACCP and FSSAI.
- d) What is Yolk index?
- e) Define Rigor mortis.

## SECTION B – K3 (CO2)

**Answer any THREE of the following**

**(3 x 10 = 30)**

- 3 Demonstrate sliding filament theory with a neat diagram.
- 4 Explain the different spoilage factors of fruits and vegetables.
- 5 Enumerate the various factors that affects the perishability of fish.
- 6 Develop a flowchart for the materials used in food Packaging.
- 7 Illustrate the classification of food preservation methods.

## SECTION C – K4 (CO3)

**Answer any TWO of the following**

**(2 x 12.5 = 25)**

- 8 Illustrate egg powder processing with a neat flow diagram.
- 9 Enumerate the specifications and processing operations of fish protein concentrate.

10	Discuss with illustrations the modes and types of membrane separations
11	Categorize the types of dryers and its applications.
<b>SECTION D – K5 (CO4)</b>	
	<b>Answer any ONE of the following</b> <span style="float: right;"><b>(1 x 15 = 15)</b></span>
12	Compare and discuss the types of millets based on their characteristics, nutrient values and uses.
13	Summarize the steps involved in wet milling of pulses with a neat flow diagram.
<b>SECTION E – K6 (CO5)</b>	
	<b>Answer any ONE of the following</b> <span style="float: right;"><b>(1 x 20 = 20)</b></span>
14	Discuss the different types of cereals, their structure, nutrient value and characteristics with illustrations.
15	Compile the various steps involved in the manufacturing of chocolate from cocoa beans.

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