

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



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

**FIRST SEMESTER – NOVEMBER 2018**

**18FPF1MC02– INTRODUCTION TO FOOD PROCESSING**

Date: 27-10-2018

Dept. No.

Max. : 100 Marks

Time: 01:00-04:00

**Part A**

**Answer all the questions.**

10 x 2 = 20 marks

1. Write the principle of fluid flow process with an example.
2. What are colloids? Mention its types with an example for each.
3. Classify foods based on low storage temperatures.
4. Name any four drying methods used in food industry with examples of foods preserved.
5. Mention the principle of ohmic heating.
6. Enlist the agents used for curing of foods.
7. Distinguish prototype and protocept.
8. How do you carry out consumer trials for a new product?
9. What is intelligent packaging?
10. List the various sources of toxic interactions of packages with foods.

**Part B**

**Answer any eight questions.**

8 x 5 = 40 marks

11. Write a note on electrical double layer and plastic fats.
12. How will you calculate the rate of aggregation using Smoluchowski's theory? Mention any two of its limitations.
13. Describe in detail the various factors responsible for the formation of gels.
14. Discuss the phenomenon of super cooling of foods with a curve diagram.
15. What are the various challenges encountered during preservation of ethnic foods?
16. Explain the working principle of pulse electric field processing.
17. Write short notes on class II preservatives.
18. Discuss the characteristics of a new product with suitable examples.
19. What are the requirements for product authorization with the government?
20. Highlight briefly the phases involved in the development of a food product.
21. Discuss the quality testing parameters of food packaging materials.
22. Write short notes on food labeling.

### Part C

**Answer any four questions.**

4 x 10 = 40 marks

23. a) Derive an expression to determine the rate constant of a first order reaction.  
b) Describe the importance of Nano filtration and ultra-filtration in food industries.
24. Explain the various thermal processing technologies in preserving foods.
25. Write a detailed note on hurdle technology.
26. What is concept testing? Write the methodology involved in food concept testing.
27. Discuss the concepts involved in active packaging technology in extending the shelf life of foods.
28. Describe the various measures adopted to reduce, recycle and reuse food packaging waste.

\*\*\*\*\*