

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



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

**FIRST SEMESTER – APRIL 2022**

**PPF 1502 – INTRODUCTION TO FOOD PROCESSING**

Date: 18-06-2022

Dept. No.

Max. : 100 Marks

Time: 01:00 PM - 04:00 PM

**PART – A**

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

**Q. No**

**Answer ALL Questions**

- 1 List the different types of membrane separation processes.
- 2 Define DLVO theory.
- 3 What are the food applications of freeze drying?
- 4 Compare refrigeration, chilling and freezing.
- 5 Mention the principles of High Pressure Processing (HPP).
- 6 Enlist the additives used for pickling of foods.
- 7 Recognize the different advertising strategies used to place a new product in the market.
- 8 Draw a sensory evaluation score card to evaluate food formulations.
- 9 Name any three edible packaging materials.
- 10 What is intelligent packaging? Give examples.

**PART – B**

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

**Answer ALL the Questions**

- 11 a. Explain the significance of  $\Delta G$ ,  $\Delta H$  and  $\Delta S$  in food engineering.  
**(OR)**  
b. Write a note on food as a dispersed system. Enumerate the factors affecting rate of chemical reactions in food.
- 12 a. Compare and contrast freezing curve and drying curve with suitable illustration.  
**(OR)**  
b. Discuss the implications of hurdle technology in food preservation.
- 13 a. Bring out the role of various traditional preservation techniques in food industry.  
**(OR)**  
b. Discuss the role of enzymes in baking industry.
- 14 a. Illustrate the classes and characteristics of a new product with suitable examples.  
**(OR)**  
b. Describe the various stages of product life cycle with its adoption and diffusion strategies.
- 15 a. Summarize the properties, applications, advantages and disadvantages of MAP.  
**(OR)**  
b. Examine the various methods adopted to test the integrity of food packaging materials.

**Answer any TWO Questions**

- 16 a. Explain the various unit operations involved in food processing industry with their principles of operations and illustrate them by individual processes. (7)  
b. Highlight the role of thermal processing in food industry. (8)
- 17 Elaborate the process of retorting foods with a suitable illustration. What are its pros and cons?
- 18 Explain the various novel non-thermal processing methods used in food industry.
- 19 Discuss the concepts involved in active packaging technology in extending the shelf life of foods.

@@@@@@