



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

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

THIRD SEMESTER – NOVEMBER 2017

**FP 3809 - CHEMISTRY OF DAIRY PRODUCTS**

Date: 07-11-2017  
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

**Part A**

**Answer ALL the questions.**

10 x 2 = 20 marks

1. List the buffering compounds in milk.
2. What is the significance of determining electrical conductivity of milk?
3. Define Koestler number.
4. Differentiate and lactose with respect to solubility.
5. Define mutarotation of lactose
6. What are milk lipids?
7. Write the fatty acid profile of milk lipids.
8. Define rennet coagulation.
9. Mention the correlation between sodium and potassium in attaining milk salt equilibrium.
10. Define titrable acidity.

**Part B**

**Answer any EIGHT questions.**

8 x 5 = 40 marks

11. Briefly discuss specific gravity of milk.
12. Outline the factors that affect the OR potential of milk.
13. Write a note on lactose biosynthesis.
14. Describe the factors affecting mutarotation of lactose.
15. Describe the factors affecting sticking temperature.
16. Write a note on sweetened condensed milk.
17. Explain the chemical composition of casein.
18. Brief lactose intolerance.
19. Describe the gross chemical composition of milk fat globular membrane.
20. Explain the measurement of calcium or magnesium ions by EDTA Titrimetric method.
21. Discuss the relationship between concentrations of certain milk salts constituents.
22. i. Classify cheese. (3 marks)  
ii. What are the factors affecting rennet coagulation? (2 marks)

**Part C**

**Answer any FOUR questions.**

4 x 10 =40 marks

23. Discuss the colligative properties of milk.
24. Write a detailed note on non enzymatic browning reactions in milk and milk products.
25. Discuss the mutarotation process of milk lactose. Write its effect of pH on mutarotation.
26. Explain the heterogeneity of Milk proteins.
27. Write a detailed note on structural hierarchy of milk proteins.
28. Describe the biochemical changes that occur during the manufacture of yoghurt

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