



Date: 31-10-2018

Dept. No.

Max. : 100 Marks

Time: 09:00-12:00

Part A

Answer all the questions.

10 x 2 = 20 marks

1. Define milk.
2. List any four factors affecting the specific gravity of milk.
3. Mention any two roles of milk Fat Globular membrane.
4. Write the gross composition of milk and its major constituents.
5. Differentiate α and β lactose with respect to solubility.
6. Define rennet coagulation.
7. Define syneresis.
8. What are the benefits of cultured milk products?
9. Mention the correlation between sodium and potassium in attaining milk salt equilibrium.
10. What is the significance of determining the electrical conductivity of milk?

Part B

Answer any eight questions.

8 x 5 = 40 marks

11. Write short notes on the taste, flavor and color of milk.
12. What are the factors affecting the oxidation reduction potential of milk?
13. Comment on the thermal and optical properties of milk.
14. Define Koestler's number and discuss its correlation with the pH of milk.
15. Describe the fatty acid profile of milk lipids
16. Write a note on ultrafiltration technique in separating milk protein
17. Describe the changes in milk salt equilibria.
18. Describe the influence of calcium ions on casein.
19. Compare the physicochemical properties of whey proteins.
20. Explain the salt composition of milk.
21. Elaborate on Gerber test for determination of milk fat.
22. Discuss the biochemical changes in milk during yoghurt fermentation.

PART C

Answer any four questions.

4 x 10 = 40 marks

23. Discuss freezing point of milk and its significance in the dairy industry.
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. Comment the properties of casein.
27. Describe the acid base equilibria of milk.
28. Elaborate on the conversion of milk to cheese.
