

Term End Examination-2014
Ph.D in Dairy Science and Technology
RDR-001: Advances in Lipid Technology

Time: Three Hours

MM: 100

Note: Attempt any five questions. All questions carry equal marks.

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| 1 (a) | What are the major sources of edible oils and fats in the World? Describe the status of oils and fats industry in India. | 10 |
| 1 (b) | What are lipids? Describe the major and minor components of food lipids. | 10 |
| 2 (a) | Give the nutritional importance of lipids? Explain the dietary significance of CLA in human health. | 10 |
| 2 (b) | Give the essential components and their functions in a continuous alkali refining process? How is this process superior to batch refining? | 10 |
| 3 (a) | Describe important processing innovations in oils and fats from different sources for application and utilization in food products. | 10 |
| 3 (b) | Describe the mechanism of formation and growth of fat crystals. | 10 |
| 4 (a) | Explain the principle and potential of enzymatic modification of oils and fats. | 10 |
| 4 (b) | Define frying and also describe important changes that occur in fats & oils during frying process. Explain the selection criteria for frying mediums. | 10 |
| 5 (a) | Define low fat spread. Describe the essential ingredients and methods of manufacture of various types of fat spreads. | 10 |
| 5 (b) | What are plasticizers? Describe the advances in production of plasticizers. | 10 |
| 6 (a) | What are antioxidants? Explain mode of action and recent trend in use of natural antioxidants. | 10 |
| 6 (b) | What is 'deodorization' of edible oils? Describe the process of deodorization with the help of a diagram. | 10 |
| 7 (a) | Explain the mechanism of cholesterol-lowering property of phytosterol with the help of a neat diagram. | 10 |
| 7 (b) | Describe the important steps with their significance involved in processing of oils. | 10 |