

**Ph.D. IN DAIRY SCIENCE AND TECHNOLOGY
(PHDDR)**

Term-End Examination

June, 2015

00083

**RDR-006 : DAIRY BY-PRODUCTS TECHNOLOGY
AND PROCESSING**

Time : 3 hours

Maximum Marks : 100

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

1. Briefly explain the manufacturing process of good quality edible casein. 20
2. Discuss cleaning and sanitization of membrane plants fitted with different types of membranes. 20
3. How is whey an important nutritional dairy by-product? Discuss the various technological developments in processing and utilization of whey. 20
4. Discuss any three important functional properties of casein and whey proteins. How are these properties useful in their utilization? 20
5. Giving all technical details, describe the process for the manufacture of pharmaceutical grade lactose from cheese whey. 20

6. (a) Explain the various physico-chemical qualities of different types of buttermilk and ghee residue. 14
- (b) List the different uses of buttermilk and ghee residue. 6
7. Answer any *four* of the following : 4×5=20
- (a) Enzymatic production of casein hydrolysates
 - (b) Production of non-hygroscopic whey powder
 - (c) Principle of electro dialysis process
 - (d) Preparation of high calcium coprecipitates
 - (e) Preparation of whey drink
 - (f) Fermented products from whey
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