

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

Term-End Examination

December, 2015

**RDR-008 : ADVANCES IN ANALYTICAL
TECHNIQUES IN DAIRY CHEMISTRY**

Time : 3 hours

Maximum Marks : 100

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- Note :** (i) *Attempt any five questions.*
(ii) *All questions carry equal marks.*
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1. Discuss in detail the principle and working of 2-Dimensional electrophoresis in separation of proteins. 20
2. Discuss the principle, working and applications of Capillary Zone Electrophoresis (CZE). 20
3. Describe the principle and working of ELISA. Discuss its various applications. 20
4. Discuss the principle and instrumentation of RP-HPLC system and give the applications of RP-HPLC in analysis of milk and milk products. 20
5. Discuss Atomic absorption spectroscopy-principle, instrumentation and applications. 20

6. Illustrate the components of mass spectrophotometer and write down the principle of MALDI-TOF and applications in dairy chemistry. **20**
7. Write short notes on : **4x5=20**
- (a) Difference between Flame Photometry and AAS
 - (b) Difference between RIA and ELISA
 - (c) Characteristics of blotting membranes
 - (d) Infra-red regions of IR spectrum
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