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RDR-008

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

Term-End Examination

June, 2015

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

Time : 3 hours

Maximum Marks : 100

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

1. Discuss Gas Chromatography – Mass Spectroscopy (GCMS), with its concepts and applications. 20
2. Discuss Infra-red spectroscopy with its principle, instrumentation and applications. 20
3. Discuss the principle and instrumentation of RP-HPLC systems and give their applications in dairy industry. 20
4. Explain the differences between flame and furnace AAS with regards to instrumentation and give advantages and disadvantages of both the systems. 20

5. Define the principle of 2D electrophoresis and its application in proteomics. 20
6. Discuss the various formats of immunoassays. Describe in detail the ELISA for biomolecule quantification. 20
7. Write short notes on the following : 4×5=20
- (a) Characteristics of PDA-detector
 - (b) Thermal Analysis of Foods
 - (c) Advantage of Western Blotting
 - (d) Hollow Cathode Lamp
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