

Ph.D. IN DAIRY SCIENCE AND TECHNOLOGY

Term-End Examination

December, 2014

**RDR-009 : APPLICATION OF BIOTECHNOLOGY
IN DAIRY INDUSTRY**

Time : 3 hours

Maximum Marks : 100

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

1. Describe the important steps and principles involved in genetic improvement of lactic acid bacteria. 20
2. Describe important metabolic developments and their significance in genome analysis of Food Grade Lactic Acid Producing Bacteria. 20
3. Describe important bioactive compounds and their functions present in milk and milk products. 20
4. Explain the basic principles involved in production of GM Foods. Also explain the associated food safety issues. 20
5. Explain role and mode of action of probiotics in control of diseases. Describe the factors in assessing the safety of probiotics. 20

6. Identify the important rapid detection tests for food borne bacterial pathogens, and give their principles and procedures. 20
 7. Describe different type of bacteriocins, their modes of action and potentials in food preservation and control of food poisoning. 20
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