

**Ph.D in DAIRY SCIENCE AND TECHNOLOGY**

**Term-End Examination**

**December, 2014**

**RDR-002 : ADVANCES IN PROTEIN  
TECHNOLOGY**

*Time : 3 hours*

*Maximum Marks : 100*

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

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1. What is the importance of proteins in our diet ? Describe the characteristics of animal flesh proteins. Explain how the nutritional quality of plant proteins can be improved ? 4+8+8=20
  
2. What are functions of proteins in food ? Explain the mechanism of denaturation of proteins. Describe the effect of denaturation on functional properties of food protein. 4+6+10=20
  
3. What are the important characteristics of caseins ? Describe different casein fractions, along with their genetic polymorphism. Explain the most accepted model of casein micelle. 4+10+6=20
  
4. Explain Protein Digestibility Corrected Amino Acid Score (PDCAAS) approach for prediction of food quality. Describe protein related allergens and their reduction in foods. 10+10=20

5. What are bioactive peptides ? Give examples of bioactive peptides present in milk and dairy products and explain the physiological effects of bioactive peptides derived from milk proteins. **2+8+10=20**
6. What is the importance of non - conventional sources of food proteins ? What are the advantages of Single Cell Protein ? Describe different physico - chemical parameters that influence the growth of yeasts for production of biomass proteins. **4+6+10=20**
7. What are the advantages and disadvantages of twin screw extruder ? Explain how the processing parameters affect the quality and textural profile of textured products ? **8+12=20**
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