

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

Term-End Examination

December, 2015

**RDR-005 : DEVELOPMENTS IN DAIRY
PROCESSING**

Time : 3 hours

Maximum Marks : 100

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

1. What are sorption isotherms ? How are they helpful in predicting shelf life and storage behaviour of foods ? What are intermediate moisture foods ? Give examples of low-moisture, intermediate-moisture and high-moisture dairy foods. **2+10+8**
2. What are probiotic foods ? How they differ from symbiotic foods ? Suggest a technical programme complete with list of ingredients and technology for formulating a symbiotic beverage. **3+3+14**
3. What are the recent trends in cleaning and sanitation in food industry ? What do you understand by biofilms ? Describe a protocol to prevent the formation and for the destroyal of biofilms. **9+4+7**
4. Explain the principles of high pressure processing and retort processing. How do they compare with UHT ? What are their limitations ? **10+5+5**

5. What are the principles of bactofugation and bacto-therm process ? Explain the principles of microfluidization of milk and its application. **8+12**
 6. What are the common additives used in formulated foods ? Explain their application in formulation of foods with one example for each. **7+13**
 7. What are the bio-protective factors present in milk ? How do they help in preservation of raw milk ? Explain the most suitable method for preserving raw milk. **3+5+12**
-