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RDR-101

PH. D. IN DAIRY SCIENCE AND TECHNOLOGY (PHDDR)

Term-End Examination

December, 2021

RDR-101 : ADVANCES IN DAIRY CHEMISTRY

Time : 3 Hours *Maximum Marks : 100*

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

1. (a) Define lipids. Classify lipids. What are the functions of lipids ? 10

   (b) Describe the functions of fat in food industry. 10

2. (a) Describe the edible oil extraction and refining process. 10

   (b) Explain the process of digestion and absorption of fat in human body. 10

3. (a) List the emerging spectroscopic techniques used for the assessment of foods. Explain any *one* in detail. 10

   (b) Describe the working principle and applications of HPLC in food industry. 10

4. (a) List any *five* novel dairy ingredients. Discuss any *two* in detail. 10

   (b) Discuss about the synthesis of Lactose in the mammary gland. 10

5. (a) Describe the physiological functions of dietary oligosaccharides. 10

   (b) Explain the structural and functional properties of proteins present in bovine milk. 10

6. (a) Discuss on the processes involved in the modification of fats and oils. 10

   (b) Write a note on the milk protein derived bioactive peptides. 10

7. Differentiate between the following : 5 each

   (a) Prebiotics and Probiotics

   (b) A_1 milk and A_2 milk

   (c) ELISA and RIA

   (d) Transfat and CLA

8. Write short notes on the following : 5 each

   (a) Denaturation of protein

   (b) Whey protein

   (c) Fortification of milk

   (d) Microbial lipids