

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

Term-End Examination

June, 2015

00259

RDR-002 : ADVANCES IN PROTEIN TECHNOLOGY

Time : 3 hours

Maximum Marks : 100

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

1. Discuss the construction and operation of a single screw extruder with the help of a neat diagram. Discuss the effect of extrusion cooking on proteins and amino acids. 10+10=20
2. What is protein denaturation ? Discuss the effect of protein denaturation on physico-chemical and functional properties of proteins. 2+18=20
3. What is protein texturization ? Give different methods of protein texturization. Discuss in detail a process of spun-fibre based texturization of proteins. 4+4+12=20
4. Discuss in brief the factors affecting stability of concentrated milks. 20

5. What are the different indices of protein quality ? Discuss in brief the different approaches for improving protein quality. $6+14=20$
 6. What causes bitterness in protein hydrolysates ? Discuss the various options available for debittering of protein hydrolysates. $6+14=20$
 7. What is a single cell protein ? What are the advantages and disadvantages of single cell proteins ? $4+16=20$
-