

Code No: RT32354

R13**SET - 1****III B. Tech II Semester Supplementary Examinations, November - 2017****DAIRY AND FOOD ENGINEERING**

(Agricultural Engineering)

Time: 3 hours

Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)2. Answering the question in **Part-A** is compulsory3. Answer any **THREE** Questions from **Part-B**

PART -A

- 1 a) What is the importance of size reduction in food processing? [3M]
- b) What are the merits and demerits of HTST method of pasteurization? [4M]
- c) What are the objectives of a good design for establishment of a dairy plant? [4M]
- d) What is meant by food deterioration? What are the factors responsible for food deterioration? [4M]
- e) What do you mean by evaporation? What are the factors affecting rate of evaporation? [4M]
- f) Write about thermal processing. [3M]

PART -B

- 2 a) Write short notes on Refractive Index of milk. [4M]
- b) Explain about National Dairy Development Board (NDDB). [8M]
- c) Name any four machineries used in modern dairy industry along with their uses. [4M]
- 3 a) Explain briefly about different types of direct heating plants in sterilization. [8M]
- b) Explain about Batch method of pasteurization of milk with the help of a diagram. [8M]
- 4 a) What do you mean by Homogenization? What are its effects, advantages and disadvantages? [8M]
- b) Briefly explain about the steps involved in planning and designing of a good plant layout. [8M]
- 5 a) Explain the composition and proximate analysis of any two milk food products. [8M]
- b) Discuss about various chemical methods of food preservation. [8M]
- 6 a) Explain about fluidized bed drying and spray drying. [8M]
- b) Explain about construction of a basic evaporator. [8M]
- 7 a) Briefly explain about Planck's equation for calculation of freezing time along with assumptions and limitations. [8M]
- b) Briefly explain about membrane processing of fruit juices. [8M]
