KERALA AGRICULTURAL UNIVERSITY

B.Tech (Agrl.Engg) 2012 Admission

VIIth Semester Final Examination-January -2016

Cat. No: Phpt 4107

Title: Dairy and Food Engineering (2+1)

Marks: 80.00

Time: 3 hours

I Fill up the blanks **(10 x 1=10)**

1. A plot of equilibrium moisture content of a food against relative humidity at constant temperature is known as .....
2. The breakdown of fat into glycerol and free fatty acid is called as .....
3. The function of the doctor blade is to .....
4. Solid ice, liquid water and water vapor co-exist at .....
5. The time temperature combination for the LTLT pasteurization of milk is .....^{0}C for ..... sec
6. The process of atomization of liquid food material into a hot gas stream is called .....
7. The SI unit of the thermal conductivity of milk is .....
8. The removal of water from a food material by direct sublimation from the frozen state to the vapor state is known as .....
9. The product derived out of milk after removal of cream is known as .....
10. Preheating temperature of milk is ..... ^{0}C during the manufacture of pasteurized milk

II. Answer any ten questions **(10 x 3=30)**

1. Leaching
2. Freezing point depression
3. Define standardization of milk
4. Bactofugation
5. Differential distillation
6. Stokes law
7. Filter cake resistance
8. Electro dialysis
9. Curing of cheese
10. Spray drying
11. Explain Thermal death time
12. Differentiate between filtration and ultra filtration

III. Answer any Six questions **(6 x 5=30)**

1. Explain batch and continuous type sterilizer
2. Explain a two stage milk homogenize r
3. What do you mean by over run in butter

4. Write a note on types of evaporators
5. With a process flow diagram explain an HTST pasteurisation process?
6. Write a note on selection of location and layout of dairy plant
7. Explain about filling and sealing machines
8. Briefly mention the points to be considered in maintenance of can washers

IV Answer any one question **(1 x 10=10)**

1. Explain the method of manufacture of ice cream with a flow diagram.
2. Explain the principle of spray drying with a schematic diagram.

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