# KERALA AGRICULTURAL UNIVERSITY

B.Tech (Food.Engg) 2013 Admission IV<sup>th</sup> Semester Final Examination- June/July -2015

Cat. No: Fden.2206
Title: Dairy Engineering and Technology (2+1)

#### Part A

Answer the following

 $(10 \times 1.0 = 10.0)$ 

Marks: 50

Time: 2 hours

## Fill up the blanks

- 1. The natural acidity of milk ----- with increase in SNF
- 2. The reduction of all micro organisms in the milk is known as ------
- 3. ----- is removal of solid impurities from milk prior to pasteurization.
- 4. The density of milk is -----
- 5. -----is used as a means of determining the total solids or added water in milk. State the following statement True (or) False
- 6. The white colour of milk is due to the presence of casein
- 7. Double toned milk consists of 1.5 per cent of fat.
- 8. The average boiling point of milk is 110 °C
- 9. Clarifier removes the impurities by centrifugal force.
- 10. Skimming is separation of butter from milk

#### Part B

Answer any FIVE questions

 $(5 \times 2 = 10.0)$ 

Define/Explain:

- 1. Lassi production
- 2. Pasteurization
- 3. Toned milk
- 4. Toned milk
- 5. Renneting
- 6. Stoke's law.
- 7. Over run.

### Part C

## Answer any FIVE questions

 $(5 \times 4.0 = 20.0)$ 

- 1. Write short notes on physico chemical properties of milk
- 2. Briefly explain the types of CIP systems.
- 3. Explain the working of centrifugal separator.
- 4. Write short notes on butter churner.
- 5. Explain the working principle of ice cream freezer.
- 6. Differentiate between reverse osmosis and ultra filtration.
- 7. Write a note on plate chiller.

### Part D

Answer any ONE question

 $(1 \times 10.0 = 10.0)$ 

- 1. Explain the technology of cheddar cheese making with a flow chart
- 2. Classify the pasteurization methods and explain any two methods.

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