

Faculty of Animal Science & Export Agriculture
Uva Wellassa University of Sri Lanka

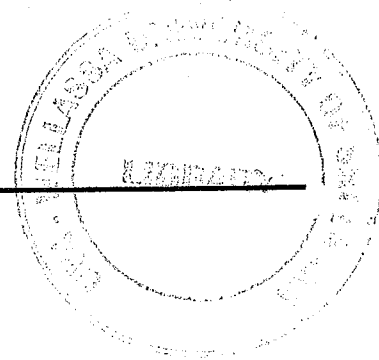


B.ASc. Degree Programme
Year III Semester I

End Semester Examination - December 2009/ January 2010

ANS 351-2 Dairy Chemistry

Essay Questions (Section II)



Instructions

Answer all questions in Section II in booklets provided.

No. of questions : Two (02)
No. of pages : Two (02)
Time : One hour (01 hour)
Total marks allocated : 60%

01. (I) Define "Recombing of milk".

(05 marks)

(II) Assume that you are given a task to tone 400 kg of buffalo milk containing 8% fat and 9% SNF. The desired fat and SNF contents in toned milk are 4% and 9% respectively. You are provided with skim milk powder (SMP) having 3% moisture content. Calculate the followings;

- Amount of toned milk that can be produced
- Amount of skim milk to be added to produce toned milk
- Amount of water to be added to produce toned milk

(30 marks)

(III) a) If we separate 550 kg of milk with 4.2 % fat, what weight of cream containing 35% fat can we expect? Mention your assumptions.

(25 marks)

b) Calculate the percentage (%) yield of cream and skim milk after separation.

(10 marks)

(IV) A milk plant is to prepare 4500 kg of standardized milk containing 3.5% fat. The dairy has whole milk with 5.5% fat. This is to be standardized with skim milk having only 0.1% fat. Estimate the quantities of whole milk and skim milk needed for the standardization.

(30 marks)

02. (I) Describe the main steps involved in casein precipitation by enzymes.

(60 marks)

(II) Explain the differences between Heterofermentative and Homofermentative bacteria and give two (02) examples for each category.

(20 marks)

(III) Mention the two (02) methods of lactose uptake by bacteria. Write down the differences between the two (02) methods.

(20 marks)

[End of Section II]

