



2ND SEM. 2017/2018

UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

PROGRAMME: B. Sc. ANIMAL SCIENCE DAIRY OPTION YEAR IV

COURSE CODE: ASD 402

TITLE OF PAPER: DAIRY TECHNOLOGY

TIME ALLOWED: TWO (2) HOURS

INSTRUCTIONS: ANSWER ANY 4 QUESTIONS.

DO NOT OPEN THIS PAPER UNTIL PERMISSION HAS BEEN GRANTED BY THE CHIEF INVIGILATOR

QUESTION 1

Explain and illustrate the differences between the following milk biomolecules:

- a) α -D-Lactose and Lactobionic acid (10 Marks)
- b) Riboflavin and β - Carotene (6 Marks)
- c) Triacylglyceride and Diacylglyceride (9 Marks)

QUESTION 2

- a) List and explain four (4) major differences between casein and whey proteins (8 Marks)
- b) Describe and illustrate the following milk biomolecules
 - i) Lecithin (10 Marks)
 - ii) Cholesterol (7 Marks)

QUESTION 3

- a) Explain and describe the origin of the biomolecules used for the Biosynthesis of milk triacylglycerides (10 Marks)
- b) Outline and illustrate the biosynthetic pathway of milk triacylglycerides (15 Marks)

QUESTION 4

Explain the major differences between the following:

- a) *Escherichia coli* and *Streptococcus thermophilus* (8 Marks)
- b) Emasi and yoghurt (8 Marks)
- c) Alcoholic dairy drinks and cultured milks (9 Marks)

QUESTION 5

- a) Explain the major differences between ice milk and ice cream (10 Marks)
- b) Discuss the technology of soft cheese (15 Marks)