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2ND SEM. 2016/2017

UNIVERSITY OF SWAZILAND

SUPPLEMENTARY 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

Describe and illustrate the following milk biomolecules:

- a) α -D-Lactose and β -D-Lactose (10 Marks)
- b) Lecithin (10 Marks)
- c) Methionine (5 Marks)

QUESTION 2

- a) List and explain **FIVE** (5) major differences between casein and whey proteins (10 Marks)
- b) Describe and illustrate the following milk biomolecules
 - i) β -D Galactose (5 Marks)
 - ii) Ascorbic acid (5 Marks)
 - iii) Alanine (5 Marks)

QUESTION 3

Explain and illustrate the biosynthesis of milk triacylglycerides (25 Marks)

QUESTION 4

Explain the major differences between the following:

- a) Ice cream and Ice Milk (8 Marks)
- b) Emasi and yoghurt (8 Marks)
- c) Alcoholic dairy drinks and cultured milks (9 Marks)

QUESTION 5

Explain the following and give two examples in each case:

- a) Exopolysaccharides produced using whey as substrate (7 Marks)
- b) Soft cheese (6 Marks)
- c) Approved milk chemical preservation systems (12 Marks)