



2ND SEMESTER 2019/2020

UNIVERSITY OF SWAZILAND

RE-SIT/SUPPLEMENTARY EXAMINATION PAPER

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

COURSE CODE: ASD402

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) Milk Riboflavin (10 Marks)
- b) Lecithin (10 Marks)
- c) Methionine (5 Marks)

QUESTION 2

- a) Explain the major differences between ice cream and ice milk (6 Marks)
- b) Describe and illustrate the following milk biomolecules
 - i) α -D Lactose (10 Marks)
 - ii) Ascorbic acid (5 Marks)
 - iii) Cysteine (4 Marks)

QUESTION 3

Giving two examples in each case, and explain the differences between the following:

- a) Yeast culture and lactic acid bacteria culture (7 Marks)
- b) Coliform bacteria and lactic acid bacteria (7 Marks)
- c) Casein proteins and whey proteins (6 Marks)
- d) Saturated and unsaturated milk fatty acids (5 Marks)

QUESTION 4

Explain the following and give two examples in each case:

- a) Exopolysaccharides produced using whey as substrate (7 Marks)
- b) Cultured milks (8 Marks)
- c) Approved milk chemical preservation systems (10 Marks)

QUESTION 5

Discuss the differences between the properties and technologies for acid cheese and sweet cheese.

(25 Marks)