



2ND SEMESTER 2019/2020

UNIVERSITY OF SWAZILAND

RE-SIT/SUPPLEMENTARY EXAMINATION PAPER

PROGRAMME: B. Sc. AGRICULTURAL EDUCATION AND B.Sc. ANIMAL
SCIENCE YEAR IV

COURSE CODE: ASD408/AS 403

TITLE OF PAPER: DAIRY PRODUCTION AND TECHNOLOGY

TIME ALLOWED: TWO (2) HOURS

INSTRUCTIONS: ANSWER ANY TWO (2) QUESTIONS IN SECTION A
AND ANY TWO (2) QUESTIONS IN SECTION B

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

SECTION A**QUESTION 1**

- a. Discuss the effect of nutrition and feeding on milk yield, protein and milk fat composition in dairy cows. (15 Marks)
- b. Describe the procedure of milking a dairy cow in the milking parlour. (10 Marks)

QUESTION 2

- a. Compare and contrast the milk production chain of Eswatini and that of a developed country. (15 Marks)
- b. Describe any four (4) different types of milking parlours. (10 Marks)

QUESTION 3

Write short notes on:

- a. Udder health and hygiene. (15 Marks)
- b. Milk hold up. (10 Marks)

SECTION B**QUESTION 4**

Describe and illustrate the following milk biomolecules:

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

QUESTION 5

- 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 6

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)