



UNIVERSITY OF SWAZILAND

2ND SEM. 2014/2015

FINAL EXAMINATION PAPER

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

COURSE CODE: ASD 403

TITLE OF PAPER: MILKING AND MILK HYGIENE

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

Discuss milk let-down and milk hold-up phenomena in the dairy cow. (25 Marks)

QUESTION 2

Write notes about the following:

a) The Koesler value. (8 Marks)

b) Contagious mastitis. (9 Marks)

c) Milk adulteration. (8 Marks)

QUESTION 3

a) Describe colostrum and explain three reasons why it should not be mixed with consumer milk. (7 Marks)

b) Explain the following:

i) Possible sources of antibiotics in consumer milk. (6 Marks)

ii) Three reasons why consumer milk should be free of antibiotics. (12 Marks)

QUESTION 4

Explain and illustrate the major anatomical differences amongst the udders of the cow, goat and sheep. (25 Marks)

QUESTION 5

a) Briefly describe the following organisms and explain their significance in milk hygiene: (25 Marks)

a. *Salmonella typhimurium*

b. *Bacillus stearothermophilus*

c. *Staphylococcus aureus*

d. *Escherichia coli*

e. *Pseudomonas fluorescens*