



**2<sup>ND</sup> SEM. 2015/2016**

**UNIVERSITY OF SWAZILAND**

**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**

Explain **FIVE** possible causes of high bacterial cell counts in raw milk and briefly explain how these can be avoided.

(25 Marks)

**QUESTION 2**

Write short notes about the following:

- a) Sources of spoilage bacteria in milk.
- b) Psychrophilic bacteria.
- c) Bactofugation .

(5 Marks)

(8 Marks)

(12 Marks)

**QUESTION 3**

Explain the roles of oxytocin and epinephrine during milking and briefly discuss steps to be undertaken to control these hormones for higher milk yields.

(25 Marks)

**QUESTION 4**

- a) Briefly describe **THREE** types of unhygienic milk
- b) Briefly discuss robotic milking and explain its significance on milk yield.

(9 Marks)

(16 Marks)

**QUESTIONS 5**

Discuss in detail **THREE** types of mastitis found in dairy herds, under the following headings: causal organisms, transmission, herd affected and control strategies.

(25 Marks)