



1ST SEM. 2011/2012

UNIVERSITY OF SWAZILAND

SUPPLEMENTARY EXAMINATION PAPER

**PROGRAMME: B. Sc. ANIMAL SCIENCE,
DAIRY OPTION III**

COURSE CODE: ASD 302

**TITLE OF PAPER: PRINCIPLES OF DAIRY
BIOTECHNOLOGY**

TIME ALLOWED: TWO (2) HOURS

INSTRUCTIONS: ANSWER ANY 4 QUESTIONS.

**THIS PAPER SHOULD NOT BE OPENED UNTIL THE CHIEF
INVIGILATOR HAS GRANTED PERMISSION.**

QUESTION 1

Discuss the advantages and disadvantages of artificial insemination in dairy production.

(25 Marks)

QUESTION 2

Discuss the regulation of modern biotechnology in Swaziland.

(25 Marks)

QUESTION 3

List and discuss any five major groups of commercially important fermentations.

(25 Marks)

QUESTION 4

Briefly discuss the following:

- a. Fed-batch fermentation
- b. Semen processing and storage
- c. Super ovulation and mating during Embryo Transfer.

(7Marks)

(8 Marks)

(10 Marks)

QUESTION 5

Write short notes on the following:

- a. Conventional biotechnology
- b. Elective-Single Embryo transfer
- c. Culture Growth phases during fermentation
- d. Animal cloning

(5 Marks)

(6 Marks)

(8 Marks)

(6 Marks)