



1ST SEM. 2011/2012

UNIVERSITY OF SWAZILAND

FINAL 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

- a. Give and explain four reasons for preventing contamination of fermentation systems **(10 Marks)**
- b. Briefly describe five practices that you can employ to prevent contamination of your fermentation process. **(15 Marks)**

QUESTION 2

Write short notes on the following:

- a. Artificial insemination techniques **(9 Marks)**
- b. Stem cell technology **(8 Marks)**
- c. Modern biotechnology and dairy production **(8 Marks)**

QUESTION 3

Discuss any five major groups of commercially important fermentations.

(25 Marks)

QUESTION 4

- a. Discuss heat synchronization during embryo transfer **(15 Marks)**
- b. Outline the steps taken in embryo transfer **(10 Marks)**

QUESTION 5

Discuss three different methods used to produce transgenic animals. **(25 Marks)**