



1ST SEM. 2014/2015

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.**

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QUESTION 1

Discuss possible nitrogen and carbon sources for fermentation media formulation.

(25 Marks)

QUESTION 2

Discuss the advantages and limitations of animal cloning.

(25 Marks)

QUESTION 3

Write short notes on:

a. Semen collection and artificial insemination timing

(15 Marks)

b. Heat synchronization in embryo transfer

(10 Marks)

QUESTION 4

Discuss the potential benefits and risks of genetic engineering.

(25 Marks)

QUESTION 5

Describe and illustrate the growth phases of *Streptococcus thermophilus* during the yoghurt production process

(25 Marks)