



1ST SEM. 2007/2008

UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

**PROGRAMME: BACHELOR OF SCIENCE IN
ANIMAL SCIENCE YEAR III**

COURSE CODE: APH 304

TITLE OF PAPER: NUTRITIONAL BIOCHEMISTRY

TIME ALLOWED: TWO (2) HOURS

INSTRUCTIONS: ANSWER ANY 5 QUESTIONS.

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

QUESTION 1

Discuss feed intake regulation in ruminant animals **(20 Marks)**

QUESTION 2

Discuss lactic acidosis under the following headings:

- a) Pathogenesis
- b) Clinical findings
- c) Diagnosis
- d) Treatment
- e) Prevention **(20 Marks)**

QUESTION 3

a) Discuss ONE fat-soluble vitamin under the following headings:

- i. Chemical nature
- ii. Sources
- iii. Function
- iv. Deficiency symptoms **(16 marks)**

b) What are the drawbacks of digestible crude protein (DCP) as a measure of protein quality in ruminant animals? **(4 Marks)**

QUESTION 4

Explain and illustrate how the cell by-passes the irreversible step of pyruvate formation during gluconeogenesis **(20 Marks)**

QUESTION 5

Discuss the importance of enzymes, and cellular compartmentalization in metabolism **(20 Marks)**

QUESTION 6

Discuss the metabolic importance and production of acetyl CoA **(20 Marks)**