



EMBU UNIVERSITY COLLEGE
(A CONSTITUENT COLLEGE OF THE UNIVERSITY OF NAIROBI)

TRIMESTER 2013/2014 EXAMINATIONS

SECOND YEAR EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN
AGRICULTURE

AAS 206: PRINCIPLES OF ANIMAL NUTRITION

DATE: AUGUST 15, 2014

TIME: 11.00AM – 1.00PM

INSTRUCTIONS:

Answer Question ONE and ANY Other TWO Questions.

QUESTION ONE

- a) Answer the following questions:
- i.) Name 5 functions of vitamins in animal bodies. (5 marks)
 - ii.) Discuss 5 functions of water in animal bodies. (5 marks)
 - iii.) Outline 5 functions of feed additives (5 marks)
 - iv.) Name 5 products of rumen digestion (5 marks)

b) Define the term absorption and explain how it takes place in the ruminant animal

(10 marks)

QUESTION TWO

a) Discuss the factors that influence nutritive value/quality of roughages (10 marks)

b) Discuss the various classes of forages citing examples of each (10 marks)

QUESTION THREE

a) Name the two groups into which vitamins are classified (2 marks)

b) Outline symptoms of Calcium deficiency (4 marks)

c) Explain what you understand by the phrase “feeding standards for maintenance”. (3 marks)

d) Outline any three factors that are considered when developing feeding standards. (3 marks)

e) i.) Define the term digestibility (2 marks)

ii.) Explain how the feed and animal factors affect digestibility. (6 marks)

QUESTION FOUR

a) Using the information given below, determine the percentage inclusion of Soya Bean Meal (SBM) and corn in a ration, following the Pearson’s square method. (10 marks)

Available feed ingredient:

Soya Bean Meal; 45% crude protein (CP)

Corn; 10% CP

Required: Crude protein levels in feed: 18%

Include all the feedstuffs in the ration and show all calculations.

- b) Outline the importance of the following nutrients giving their sources
- i.) Vitamin C (2 marks)
 - ii.) Vitamin K (2 marks)
 - iii.) B Complex Vitamins (2 marks)
 - iv.) Vitamin A (2 marks)
- c) Define the term feed additive giving examples (2 marks)

QUESTION FIVE

- a) Answer the following questions:
- i.) Describe the difference between oils and fat. (4 marks)
 - ii.) Give four factors affecting the absorption of minerals in the body. (4 marks)
 - iii.) Describe the metabolizable energy. (2 marks)
- b) Define the following terms
- i.) Productivity (2 marks)
 - ii.) Compensatory growth (2 marks)
- c) Outline the factors you would consider when balancing a ration (6 marks)

---END---