



MASENO UNIVERSITY
UNIVERSITY EXAMINATIONS 2013/2014

SECOND YEAR FIRST SEMESTER EXAMINATION FOR THE
DEGREE OF BACHELOR OF SCIENCE IN ANIMAL SCIENCE
AND BACHELOR OF EDUCATION WITH INFORMATION
TECHNOLOGY
(MAIN CAMPUS)

AAN 202: ANIMAL NUTRITION

Date: 27th November, 2013

Time: 8.30 - 10.30 a.m.

INSTRUCTIONS:

- **Answer ALL questions.**

Answer ALL Questions

SECTION A

1. a. Other than feed factor, name two more factors that determine feed intake by the animal **(2 marks)**
b. Outline the characteristics of Total Mixed Ration (TMR) **(3 marks)**
c. Assume your model animal for TMR is a cow, state any four (5) advantages accrued for such a system in feeding a cow **(5 marks)**
2. a. Outline the sources of mineral used in animal nutrition **(4 marks)**
b. Calcium is controlled by two hormones i.e parathormone (PTH) from parathyroid glands and calcitonin from thyroid gland. Explain the function of the two hormones **(2 marks)**

c. Briefly explain the uses of the following feed additives; hormones, tranquilizers, preservatives and antioxidants **(4 marks)**
3. a. State any 4 factors to consider when making a choice of the ingredients to use in ration formulation **(4 marks)**
b. Using the Pearson square method of feed formulation, use the feedstuffs listed below to formulate a feed containing 20% crude protein **(4 marks)**
 Maize germ (14 % CP)
 Lupin seed meal (36 %CP)
4. a. List two methods each for chemical and *in-vivo* methods of feed evaluation **(4 marks)**
b. Name the three *folatile fatty acid* derived from microbial fermentation **(3 marks)**
c. List the means through which animal may loose water **(3 marks)**

d. Name common method of feed conservations **(2 marks)**

SECTION B

5. Discuss any five (5) Feed factors that affect voluntary feed intake in livestock **(10 marks)**
6. Discuss any 5 Functions of water as an animal nutrients **(10 marks)**
7. Nutrients requirement in an animal body are broadly divided into two categories. Discuss the two categories explaining why we feed the animals **(10 marks)**