

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

**EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE IN
ANIMAL SCIENCE**

ANSC 332: FEEDS AND FEEDING

STREAMS: BSC (ANIMAL SCIENCE)

TIME: 2 HOURS

DAY/DATE: TUESDAY 04/12/2018

2.30 P.M. – 4.30 P.M.

INSTRUCTIONS:

- **Answer ALL questions in Section A and any 2 questions in Section B.**

SECTION A

1. Define the following: (16 marks)
 - (a) Dry Matter (2 marks)
 - (b) Silage (2 marks)
 - (c) Limiting amino acid (2 marks)
 - (d) NPN (2 marks)
 - (e) Phase feeding (2 marks)
 - (f) Feedstuff (2 marks)
 - (g) Biological value (2 marks)
 - (h) Omnivorous animal (2 marks)
2. Giving brief answers or explanations of the following statements. (24 marks)
 - (a) Explain the fact that non-ruminants feeding on plant sources of phosphorus can still suffer from phosphorus deficiency. (4 marks)
 - (b) Outline the best stage of maturity to feed forages to animals. (4 marks)
 - (c) The basic principles in making hay. (4 marks)
 - (d) Differentiate between a complete diet and a supplement. (4 marks)

(e) Name 4 animal protein concentrates. (4 marks)

(f) Describe the role of probiotics in the ration. (4 marks)

SECTION B

3. Fibre sometimes forms a significant proportion of the ration of ruminant animals

(a) Describe the difference between the proximate and van Soest systems of analyzing fibre content of feeds. (4 marks)

(b) Outline two ways of improving the utilization of straw in ruminant rations. (4 marks)

(c) Discuss the importance of fibre in the ration of lactating cows. (4 marks)

(d) List 3 classes of feedstuffs giving one example in each. (3 marks)

4. There are many ways of expressing the nutritive value of a feedstuff

(a) Explain the above statement (2 marks)

(b) Name and describe 2 systems of evaluating the energy value of feedstuffs. (6 marks)

(c) Describe 2 factors that affect the nutritive value of a feedstuff. (4 marks)

(d) List 3 ways of processing feedstuffs. (3 marks)

5. Formulation of a ration requires a good understanding of the nutrients requirements of an animal

(a) Explain the above statement (2 marks)

(b) List any six basic information required in formulating a ration. (3 marks)

(c) An animal was offered 800 g of feed daily with a dry matter content of 80%. The mean daily feed residual was 150g and daily faecal output was 550g with a DM of 32%. Calculate the digestibility of the feed. (6 marks)

(d) Discuss two main considerations in feeding piglets immediately after birth. (4 marks)

