



(Knowledge for Development)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS 2022/2023 ACADEMIC YEAR

THIRD YEAR 1ST SEMESTER MAIN EXAMINATION

**FOR THE DEGREE OF BACHELOR OF SCIENCE AGRICULTURE AND
BIOTECHNOLOGY; B.SC. AGRICULTURE EDUCATION AND
EXTENSION; AGRICULTURAL ECONOMICS AND RESOURCE
MANAGEMENT; AND B.ED. SCIENCE**

COURSE CODE: AAP 311
COURSE TITLE: ANIMAL NUTRITION

DATE: 20TH DECEMBER 2022

TIME: 2 – 4 PM

INSTRUCTIONS TO CANDIDATES

There are a total of five (5) Questions.
Answer Question 1 and any other two (2) Questions.

TIME: 2 Hours

This paper consists of 2 printed pages. Please Turn Over



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Q1. COMPULSORY QUESTION (30 MARKS)

- a) Describe the important factors considered in livestock feed formulation. **(4 marks)**
- b) Distinguish between food and nutrient. **(4 marks)**
- c) Estimate the amount of Dry Matter intake (DMI) of a dairy cow weighing 450 kg live weight and producing 20 kg milk per day. **(2marks)**
- d) Suppose the DMI in (a) above was obtained from fresh Napier grass containing 70% moisture, calculate the weekly cost of fresh Napier grass the cow will consume if fresh napier grass costs Ksh 10 per kg. **(8 marks)**
- e) Describe the contents of pancreatic juice. **(6 marks)**
- f) Explain the fate of dietary energy in the body of an animal. **(6 marks)**

ANSWER ANY TWO QUESTIONS

- Q2.** Discuss the factors affecting feed intake in ruminants. **(20 marks)**
- Q3. a)** Discuss digestion of carbohydrate in ruminants. **(10 marks)**
- Q3. b)** Explain the digestion of proteins in non-ruminant animals. **(10 marks)**
- Q4. a)** Explain how dietary proteins can be protected from degradation in the rumen. **(10 marks)**
- Q4. b)** Briefly describe factors considered in feed formulation. **(10 marks)**
- Q5. a)** Explain the limitations of Digestibility Coefficient in feed analysis. **(10 marks)**
- Q5. b)** Describe the fate of dietary amino acids and ammonia in ruminant animals. **(10 marks)**
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