



*(Knowledge for Development)*

# **KIBABII UNIVERSITY**

**UNIVERSITY EXAMINATIONS**

**2017/2018 ACADEMIC YEAR**

**THIRD YEAR SECOND SEMESTER**

**MAIN EXAMINATION**

**FOR THE DEGREE OF BACHELOR OF SCIENCE IN AGRICULTURE  
AND BIOTECHNOLOGY**

**COURSE CODE:** SAB 320

**COURSE TITLE:** ANIMAL NUTRITION

**DATE:** 12<sup>TH</sup> JANUARY 2018

**TIME:** 9 – 11 AM

---

## **INSTRUCTIONS TO CANDIDATES**

**Answer a total of 3 questions.**

**Question ONE (1) is compulsory; choose and any other TWO.**

**TIME:** 2 Hours

This Paper Consists of 2 Printed Pages. Please Turn Over. ►

**QUESTION ONE (30 Marks) - Compulsory**

- Q1. a) Explain the differences between enzymatic and microbial digestion. (4 marks)
- Q1. b) Identify the four classes of feedstuffs based on moisture content. (4 marks)
- Q1. c) Use Pearson Square method to estimate the amount in kilograms of each ingredient required to formulate 70 kg of feed given the following conditions: (6 marks)

Crude protein required in the feed: 18 %

Crude protein content of ingredients: maize meal , 6 %; cotton seed cake 24%.

- Q1. d) State and describe any five anti-nutritive factors in food. (10 marks)
- Q1. e) Briefly explain the use of the following terminologies as used in animal nutrition:
- i) digestion; (2 marks)
  - ii) absorption; (2 marks)
  - iii) metabolism. (2 marks)

**Answer any two Questions (40 Marks)**

- Q2. Discuss absorption of nutrients in ruminant animals. (20 marks)
- Q3. Discuss factors affecting feed intake in non ruminant animals. (20 marks)
- Q4. Discuss the concepts of non-protein nitrogen and protection of dietary proteins.(20 marks)

**END**