



“Investing in Africa’s future”

DEPARTMENT OF AGRICULTURE AND NATURAL SCIENCE

**AAS 301: APPLIED ANIMAL NUTRITION
END OF FIRST SEMESTER EXAMINATIONS
November/December 2019
LECTURER: WASHAYA S
DURATION: 3 HOURS**

INSTRUCTIONS

Answer any **FIVE** questions

All questions carry equal marks (20).

DO NOT repeat material.

Write legibly.

APPLIED ANIMAL NUTRITION

3 hours (100 Marks)

Dec 2019

INSTRUCTIONS

Answer any FIVE questions. Each question carries 20 marks

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1. Nutritionist do not perceive water to be a nutrient, discuss the importance of water under the following headings
 - a. Functions of water (6 marks)
 - b. Types of water (3 marks)
 - c. Water intake and quality (4 marks)
 - d. Water loss form an animal's body (7 marks)
 2. a. Given the following information formulate a broiler starter diet (CP 21%) using the Pearson square method (10 marks)
Yellow maize CP = 11%
Soya bean meal CP = 43 %
b. Discuss the effects of anti-nutritional factors in animal nutrition. (10 Marks)
 3. With aid of a diagram show the partitioning of animal food, explaining the importance of each component (20 marks)
 4. Write short notes on the following:
 - a. Factors that affect voluntary food intake (12marks)
 - b. Rumen fermentation (8 marks)
 5. Briefly discuss the following feed evaluation methods
 - a. Tilley and Terry (8 marks)
 - b. In-vitro Gas production (Menke) (6marks)
 - c. Nylon bag technique (6 marks)
 6. Briefly describe the following protein evaluation methods for Monogastric animals
 - a. Biological value (5 marks)
 - b. Gross protein ratio (5 marks)
 - c. Protein efficiency ratio (5 marks)
 - d. Net protein utilization (5 marks)
 7. Describe the Total digestible nutrients (TDN) and Starch equivalent (SE) as feed evaluation methods, highlighting their advantages and weaknesses. (20 marks)

END OF PAPER