



**1<sup>ST</sup> SEM. 2018/2019**

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**UNIVERSITY OF ESWATINI**

**RE-SIT EXAMINATION PAPER**

**PROGRAMME:** BSC. ANIMAL SCIENCE (DAIRY OPTION) III  
BSC. ANIMAL SCIENCE IV  
BSC. AGRICULTURAL EDUCATION III

**COURSE CODE:** ASC 304

**TITLE OF PAPER:** NUTRITION, FEEDS AND FEEDING

**TIME ALLOWED:** TWO (2) HOURS

**INSTRUCTIONS:** ANSWER ANY FOUR (4) QUESTIONS

**DO NOT OPEN THIS PAPER UNTIL PERMISSION HAS BEEN GRANTED BY  
THE CHIEF INVIGILATOR.**

**Question 1**

- (a) Briefly describe how the following affects voluntary feed intake.
- (i) Social dominance (5 Marks)
  - (ii) Animal physiology (5 Marks)
  - (iii) Nutrient concentration in Forages (5 Marks)
- (b) Every year, small scale broilers farmers in Swaziland complain of slow growth rates of the chickens between June to July and also December to January yet the quality of feed and feeding system remained unchanged the whole year. Explain the possible reasons for the observed poor performance of the chickens. (10 Marks)

**Question 2**

- (a) A sheep consumed 1 kg/day of rye grass that has 75% dry matter (DM) and excreted 0.6 kg/day of faeces that has 45% DM. What is the DM digestibility of the feed expressed as a percentage and coefficient? (10 marks)
- (b) Discuss the following methods of measuring the digestibility of feeds
- (i) In vitro (5 Marks)
  - (ii) In sacco (5 Marks)
  - (iii) In vivo (5 Marks)

**Question 3**

- (a) Briefly discuss the purpose of feed evaluation in animal production. (10 Marks)
- (b) A pig farmer with pigs weighing an average of 50 kg with a crude protein (CP) requirement of 15%. The available feed ingredients include yellow maize, 9.5 % CP and commercial premix, 36% CP.
- (i) Work out a balanced crude protein diet for the farmer's pigs. (10 Marks)
  - (ii) Calculate the proportion of the feed ingredients for a 50 kg feed mix of the diet. (5Marks)

**Question 4**

Acidiosis and Bloat are common metabolic disorders in feedlot animals. Discuss the common causes of these disorders and how would you advice the local farmers in preventing and treating them. (25 marks)

**Question 5**

Discuss the factors affecting vitamin requirement and utilization in animals

**(25 Marks)**