

WOMEN'S UNIVERSITY IN AFRICA



Addressing gender disparity and fostering equity in University Education

FACULTY OF AGRICULTURAL SCIENCES

BSc. Hons in ANIMAL SCIENCE

MAIN PAPER

MSc: AS213 ANIMAL NUTRITION

INTAKE: SECOND YEAR FIRST SEMESTER

DATE: **TIME: 3 HOURS**

INSTRUCTIONS TO CANDIDATES

Answer any four questions.

1. Explain the following;
 - a) Antinutritional factors [7]
 - b) Chewing the cud [10]
 - c) Chemostatic theory [8]
2. a) Briefly describe 4 different classes of feeds available for consumption by livestock [10]
b) Name and describe a technique that can be used to evaluate feed or ingredient quality in animal nutrition [15]
3. Minerals and vitamins are vital for the health of livestock. Describe the functions of any;
 - a) Four vitamins [10]
 - b) Six minerals [15]
4. a. Name the different classes of nutrients under the Weende system [10]
b. Describe each of the classes you named in 4(a) above [15]
5. Briefly explain the significance of the following practices;
 - a. Withdrawal of feed from chickens 6 hours prior to slaughter [4]
 - b. Resting goats adequately before they are slaughtered for meat [6]
 - c. With the aid of a properly labelled diagram, illustrate the major differences between named ruminant and non-ruminant digestive systems [15]
6. Describe the *in vitro* methods used to determine feed digestibility [25]

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SPECIAL PAPER

MSc: AS213 ANIMAL NUTRITION

INTAKE: SECOND YEAR FIRST SEMESTER

DATE: **TIME: 3 HOURS**

INSTRUCTIONS TO CANDIDATES

Answer any four questions.

1. Write short notes on the following theories of feed intake;
 - b. Lipostatic [6]
 - c. Energostatic [6]
 - d. Thermostatic [6]
 - e. Glucostatic [7]
2. Describe the following methods used to determine feed digestibility
 - a) The Tilley and Terry method [7]
 - b) The Mobile Nylon Bag [10]
 - c) The Menke technique [8]
3. a. When slaughtering large stock using the knife, which blood vessel do we target to sever and why? [10]
b) Describe and explain 3 methods that can be used to reduce or avoid pain and suffering during the slaughter of food animals. [15]
4. Describe the functions of the following minerals and vitamins in pig nutrition;
 - a) Iron [5]
 - b) Calcium [5]
 - c) Molybdenum [5]
 - d) Vitamin D [5]
 - e) Vitamin K [5]
5. With the aid of specific examples, describe the effects of antinutritional factors on nutrient metabolism of non-ruminant animals [25]
6. Describe, in detail, the various classes of feed available for feeding both ruminant and non-ruminant livestock in Zimbabwe [25]