



**NAMIBIA UNIVERSITY  
OF SCIENCE AND TECHNOLOGY**

**FACULTY OF HEALTH, NATURAL RESOURCES AND APPLIED SCIENCES  
SCHOOL OF AGRICULTURE AND NATURAL RESOURCES SCIENCES  
DEPARTMENT OF AGRICULTURAL SCIENCE AND AGRIBUSINESS**

<b>QUALIFICATIONS : BACHELOR OF SCIENCE IN AGRICULTURE</b>	
<b>QUALIFICATIONS CODE: 07BAGA</b>	<b>LEVEL: 7</b>
<b>COURSE CODE: SRH611</b>	<b>COURSE NAME: SUSTAINABLE SMALL RUMINANT HUSBANDRY</b>
<b>DATE: JULY 2023</b>	<b>PAPER: THEORY</b>
<b>DURATION: 3 HOURS</b>	<b>MARKS: 150</b>

<b>SECOND OPPORTUNITY EXAMINATION QUESTION PAPER</b>	
<b>EXAMINER:</b>	MRS. LUCIA TUYENI-KELAO KAFIDI
<b>MODERATOR:</b>	DR. HILMA R. AMWELE

<b>INSTRUCTIONS</b>
<ol style="list-style-type: none"><li>1. Answer all the questions.</li><li>2. Write neatly and clearly.</li><li>3. Mark all answers clearly with their respective question numbers</li><li>4. All written work <b>MUST</b> be done in blue or black ink.</li><li>5. No books, notes and other additional aids are allowed</li></ol>

**PERMISSIBLE MATERIALS**

1. Calculator
2. Examination paper
3. Examination script

**THIS QUESTION PAPER CONSISTS OF 5 PAGES  
(Including This Front Page)**

**QUESTION 1**

1. If bales of fleece wool are marked as follows, what does it mean? Provide all the necessary information.
- 1.1 EFF [2]  
1.2 DDM [2]  
1.3 CSS [2]

**QUESTION 2**

- 2.1 What are the common diseases that ought to affect the fertility of the ram. [3]  
2.2 Since 1989 to 2002 Namibia had been trying to develop its own sheep breed specifically for the harsh. Define the term Animal Husbandry. [2]

**QUESTION 3**

According to the commercial production and reproduction operation calendar for sheep:1

- 3.1 What is the best time to select replacement ewe lambs? [2]  
3.2 what is the best time for weaning? [2]

**QUESTION 4**

- 4.1 What is Pregnancy Toxemia in sheep? [3]  
4.2 What causes of pregnancy toxemia (disease)? [5]

**QUESTION 5**

- 5.1 Explain the breed characteristics of the Kunene goats of Namibia. [7]  
5.2 What would be the good Benchmarks or Performance Traits to be achieved for Successful Small Stock production? [5]

**QUESTION 6**

Discuss the oestrous circle of the small ruminant (goat and sheep). Indicate the timeline per period and the activities that are taking place at a time.

- 6.1 Oestrus [4]  
6.2 Proestrus [4]

**QUESTION 7**

Evaluate and analyse the small stock industry in Namibia, regarding the types of marketing.

- 7.1 Bush Markets [5]  
7.2 Speculators [5]

**QUESTION 8**

- 8.1 Explain the differences between the lamb and mutton meat. [10]  
8.2 Describe the Body Condition (BCS) 4 (Four) of the sheep. [6]

**QUESTION 9**

- 9.1 Livestock farming can have various impacts on the environment. Demonstrates the understanding on how predators could be dealt to comply with FANMeat standards. [5]
- 9.2 Express your knowledge and understanding by discussing the recommended [5]

**QUESTION 10**

- 10.1 Assume that some of your sheep were serviced on the 02 July 2022. Calculate the lambing day. Show all steps involved in determining of the estimated days. [7]
- 10.2 A doe consumed 2.50kg of Dry Matter (DM) of feed and excreted 0.85kg of DM. Calculate the digestibility of such feed. [4]

**QUESTION 11**

Demonstrates the understanding on how the following crucial farm management issues could be dealt with to comply with FANMeat standards.

- 11.1 Water [3]
- 11.2 Facilities and Restricted Areas [2]

**QUESTION 12**

Express your knowledge and understanding by discussing the main roles and functions of the Meat Board of Namibia. [10]

**QUESTION 13**

We discuss various indigenous goat breeds. When you were given a chance to choose one of them to start your goats' farming business, you have chosen Kunene goats. Discuss comprehensively why. [10]

#### **QUESTION 14**

- 14.1 Livestock owners, managers and their personnel have a legal and moral responsibility for the welfare of animals under their control. This entails the welfare of livestock raised and kept for meat production and breeding but also the welfare of animals used for farm work (horses, dogs, etc.). Explain the basic principles for animal welfare. [5]
- 14.2 Explain the important purposes of FANMeat Scheme to the livestock producers. [3]

#### **QUESTION 15**

A farmer mated 300 Does and 295 of these were scanned pregnant. 290 of these Does kidded, 935 kids were born alive, and 850 kids were weaned. Calculate the following reproduction parameters of this herd of goats.

- 15.1 Fecundity Rate (Fec): [3]
- 15.2 Weaning Percentage (WP) [3]

#### **QUESTION 16**

Mr. Manamo is farming with 250 goats on pasture. He realised that the pasture is not enough to sustain the animals throughout the year until the next rain season. Hence, decided to buy some hays and silage for supplementing. The price for hay is = N\$1000.00/Ton and for silage is = N\$1500.00/Ton.

**Calculate** the costs for hay and silage which are required to feed the entire herd for two months (April to May). The goats need 45kg/day of hay and 30kg/day of silage respectively, for those two months/herds. [8]

#### **QUESTION 17**

Calculate the costs of the feed required to feed two (2) rams for two months (September and October) if each feed ingredient costs N\$4.00 per part. A good ration for working rams must be composed of the following feed ingredients per day per ram: [10]

- 2 of parts yellow mealie meal
- 5 of parts oatmeal
- 3 of part wheat bran
- 0.5 of part fishmeal

**QUESTION 18**

Use the tooth counts below to determine how old these goats are.

[3]

