



**NAMIBIA UNIVERSITY  
OF SCIENCE AND TECHNOLOGY**

**FACULTY OF HEALTH, APPLIED SCIENCES AND NATURAL RESOURCES**

**Department of Agriculture and Natural Resources Sciences**

<b>QUALIFICATIONS :</b> BACHELOR OF SCIENCE IN AGRICULTURE	
<b>QUALIFICATIONS CODE:</b> 07BAGA	<b>LEVEL:</b> NQF LEVEL 6
<b>COURSE CODE:</b> SLH611S	<b>COURSE NAME:</b> SUSTAINABLE LARGE RUMINANT HUSBANDRY
<b>DATE:</b> JULY 2022	<b>SESSION:</b> JULY
<b>DURATION:</b> 3 HOURS	<b>MARKS:</b> 100

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

<b>INSTRUCTIONS</b>
<ol style="list-style-type: none"><li>1. Answer all questions</li><li>2. Type clearly and neatly</li><li>3. Number the answers clearly</li><li>4. Report all your answers to the correct significant figures</li></ol>

**PERMISSIBLE MATERIALS**

1. Calculator
2. Examination paper
3. Examination script

**THIS QUESTION PAPER CONSISTS OF 2 PAGES (Excluding this front page)**

**Question 1**

Define the following terms:

- Ketones (1)
  - Ataxia (1)
  - Metabolism (2)
  - Water retention (1)
  - Edema (1)
  - Oxidation (2)
- [8]**

**Question 2**

- 2.1 What are the parts of the ruminant digestive system? (10)
- 2.2 What is the function of the rumen and reticulorumen? (4)
- [14]**

**Question 3**

- Explain the following terms of dairy management system. [8]
- Steaming up period
  - Inter-calving period
  - Lactation period
  - Service period

**Question 4**

Explain the following testicle consistency scores 1, 2, 3, 4 and 5. [10]

**Question 5**

What is the Bos-taurus cattle breed and give 2 examples? [6]

**Question 6**

What will the technician be careful of when inseminating the cow? [8]

**Question 7**

- What are the following terms?
- Cytokines (2)
  - Lymphokines (2)
  - Interleukins (2)
  - Interferon (2)
- [8]**

**Question 8**

Explain the functions of Natural killer cells (NK). [8]

**Question 9**

Which area of the ear should the tattoo be applied and why? [4]

**Question 10**

What are the role hormones and minerals play in control of estrus cycle? [11]

**Question 11**

What are structure and function of the nerve systems? [11]

**Question 12**

Give 2 deficiencies of the following nutrients? [4]

- Folic Acid
- Pantothenic acid B3

**Total: [100]**