



**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: SLH611S</b>	<b>COURSE NAME: SUSTAINABLE LARGE RUMINANT HUSBANDRY</b>
<b>DATE: JULY 2023</b>	<b>PAPER: THEORY</b>
<b>DURATION: 3 HOURS</b>	<b>MARKS: 100</b>

<b>SECOND OPPORTUNITY EXAMINATION QUESTION PAPER</b>	
<b>EXAMINER:</b>	MS. LIISA INDILENI KANDJIBI
<b>MODERATOR:</b>	MRS. LUCIA TUYENI-KELAO KAFIDI

<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 3 PAGES  
(Including This Front Page)**

**Question 1**

1.1 Apart from the 4 – compartment stomachs, what are the other parts of ruminant digestive system? (8)

1.2 How is cattle age estimated? (4)

1.3 Name four elements contained in the saliva. (4)

[16]

**Question 2**

2.1 What are the characteristics of beef breeds? (4)

2.2 Give four indigenous breeds of Africa. (4)

[8]

**Question 3**

3.1 Explain the body condition score 3 (BCS:3) for dairy cows. (3)

3.2 When you are scoring the body condition of dairy cows, which parts do you need to look at? (7)

[10]

**Question 4**

4.1 Testosterone has several major functions, give any four functions of the testosterone. (4)

4.2 Explain the functional anatomy of a bull? (4)

[8]

**Question 5**

What are the procedures to follow when introducing an orphan calf to nursing cows? [10]

**Question 6**

6.1 Explain how to clean the teats and udder before milking. (4)

6.2 Name three (3) different types of mastitis. (3)

[7]

**Question 7**

7.1 How does it feel like when you palpate the uterus horns of a cow that is 45 days pregnant? (2)

7.2 What are the four conditions that could cause dystocia. (4)

[6]

**Question 8**

8.1 Define the following terms:

8.1 Ketosis (1)

8.2 Ketones (1)

8.3 Water retention (1)

8.4 Epithelial (1)

8.5 Tetany (1)

[5]

**Question 9**

Give two functions of the following nutrients:

- 8.1 Iodine (2)  
8.2 Copper (2)  
[4]

**Question 10**

Explain how to collect semen or sperm with the artificial vagina.

[5]

**Question 11**

List and explain the four stages of the estrous cycle.

[8]

**Question 12**

Name three major hormones that are produced by thyroid gland.

[3]

**Question 13**

13.1 Which type of dehorning methods is designed for calves younger than one to two weeks old? (1)

13.2 List other four types of dehorning methods. (4)

[5]

**Question 14**

14.1 What are the three parts of neuron? (3)

14.2 Differentiate between central nervous system and peripheral nervous system. (2)

[5]

**Total [100]**