



**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: SNH611S</b>	<b>COURSE NAME: SUSTAINABLE NON-RUMINANT HUSBANDRY</b>
<b>DATE: JANUARY 2025</b>	<b>PAPER: 2</b>
<b>DURATION: 3 HOURS</b>	<b>MARKS: 100</b>

<b>SECOND OPPORTUNITY/SUPPLEMENTARY EXAMINATION QUESTION PAPER</b>	
<b>EXAMINER:</b>	<b>DR. GABRIEL NGUNGAA HANGARA</b>
<b>MODERATOR:</b>	<b>MRS. LUCIA TUYENI-KELAO KAFIDI</b>

<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. Examination paper
2. Examination script

**THIS QUESTION PAPER CONSISTS OF 1 PAGE  
(Excluding This Front Page)**

### Question 1

Define the following terms

- 1.1 Omnivores (1)
  - 1.2 Herbivores (1)
  - 1.3 Carnivores (1)
  - 1.4 Differentiate between fish and chicken digestive systems parts. (11)
- [14]

### Question 2

State whether the following diseases are Bacterial, Protozoan, or Viral diseases and give three symptoms of each.

- 2.1 Fowl Typhoid (4)
  - 2.2 Avian pox (4)
  - 2.3 Newcastle (4)
  - 2.4 Name two different systems of broiler production and differentiate them. (8)
- [20]

### Question 3

- 3.1 Differentiate between Cestoda worms and Pintado worms. (4)
  - 3.2 Name three distinct layers of fish skin and give one function of each layer. (6)
- [10]

### Question 4

- 4.1 Name three parts of the fish circulatory system and give three functions of each. (12)
  - 4.2 Explain the osmoregulation of Marine and Freshwater fish. (9)
- [21]

### Question 5

- 5.1 What are the key differences between the water-based system and land-based system? (4)
  - 5.2 Name three primary hormones involved in fish reproduction and give one function of each. (6)
- [10]

### Question 6

- 6.1 Explain what causes still birth in pigs. (8)
  - 6.2 Give 6 methods of pregnancy diagnosis (PD) in pigs. (6)
  - 6.3 Give three examples on how Brucellosis get transmitted. (3)
- [17]

### Question 7

- 7.1 Define the term Cuniculture. (2)
  - 7.2 At what age do rabbits reach maturity? (2)
  - 7.3 What is the gestation period of rabbits? (2)
  - 7.4 When do you wean rabbit bunnies from does? (2)
- [8]

Total [100]