



**FACULTY OF NATURAL RESOURCES MANAGEMENT AND
AGRICULTURE**

BACHELOR OF SCIENCE HONOURS DEGREE IN ANIMAL SCIENCE

LAS4112 ANIMAL PRODUCTS PROCESSING

MAIN EXAMINATION

Semester I, Segment 2

November 2024

Time Allowed : 3 hours
Special requirement : None
Examiner : Mr M. Mahlangu

Instructions to Candidates:

1. This paper consists of six questions, answer **ALL** questions in **Section A** and **ANY TWO** in **Section B**.
2. Marks for each question are shown in brackets. Where a question has subdivisions, the marks for each subdivision are given.
3. Illustrate your answer, where applicable, with large clearly labelled diagrams.

MARK ALLOCATION PER SECTION	MARKS
SECTION A	60
SECTION B	40
TOTAL ATTAINABLE MARKS	100

This paper consists of three printed pages including this one.

SECTION A: ANSWER ALL QUESTIONS IN THIS SECTION

QUESTION 1

- (a) Define mayonnaise, briefly in your own words. [2 marks]
- (b) Describe the role of the following in the making of mayonnaise:
- (i) Oil [3 marks]
 - (ii) Eggs [3 marks]
 - (iii) Vinegar [3 marks]
 - (iv) Mustard [3 marks]
 - (v) Spices and Herbs [3 marks]
 - (vi) Salt [3 marks]

QUESTION 2

- (a) Discuss the five animal freedoms involved in modern animal welfare. [10 marks]
- (b) Describe how village farmers could improve their farming operations from animal welfare perspective. [10 marks]

QUESTION 3

- (a) Differentiate between spices and herbs. [2 marks]
- (b) State the various types of herbs/spices that are used in the meat industry. [5 marks]
- (c) Give examples of possible products that could be produced from game meat. [5 marks]
- (d) Discuss the challenges faced by village farmers in processing their meat products. [8 marks]

SECTION B: ANSWER ANY TWO QUESTIONS IN THIS SECTION

QUESTION 4

- (a) Evaluate how you would design an affordable smoker in rural Gwanda. [5 marks]
- (b) Describe the production of smoked goat sausages including the tree type and packaging. [15 marks]

QUESTION 5

You have been tasked with improving the product lines for a goat and cattle farm, which solely relies on selling fresh goat and cow's milk.

- (i) Give 5 products that could be produced from the milk. **[5 marks]**
- (ii) Analyse the packaging material and targeted market of your selected product. **[5 marks]**
- (iii) Explain how one of the products you mentioned in 5(i) is made, including the temperature and other processing techniques involved. **[10 marks]**

QUESTION 6

- (a) Discuss the production of pastrami from local indigenous cattle and specify the section you will use for your final product and the spices of your choice. **[10 marks]**
- (b) Describe in detail the production of polony from local indigenous pigs (Mukota) and describe which parts you would use including spices and a local indigenous fruit. **[10 marks]**

END OF EXAMINATION PAPER