



**FACULTY OF NATURAL RESOURCES MANAGEMENT AND
AGRICULTURE**

DEPARTMENT OF ANIMAL PRODUCTION AND HEALTH

BACHELOR OF SCIENCE HONOURS DEGREE IN ANIMAL SCIENCE

FOOD SAFETY AND QUALITY MANAGEMENT (LAS4104)

FINAL 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

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SECTION A: ANSWER ALL QUESTIONS IN THIS SECTION

QUESTION 1

- a) Explain why reheating potatoes can make them harmful to eat. **[5 marks]**
- b) Evaluate why eating raw kidney beans can be a danger to children. **[5 marks]**
- c) Discuss why you should not rinse poultry before cooking it. **[5 marks]**
- d) Discuss briefly why food inspectors should ensure personal hygiene in working spaces. **[5 marks]**

QUESTION 2

- a) Highlight the pathogens that lead to milk spoilage. **[5 marks]**
- b) List the challenges faced by small holder dairy farmers in getting good quality milk to processors. **[5 marks]**
- c) Discuss in detail bulk milk sampling procedures. **[10 marks]**

QUESTION 3

- a) Using practical examples, discuss the terms: food safety and food security. **[10 marks]**
- b) Describe how quality assurance can be used to monitor and control food quality and safety in Zimbabwe. **[10 marks]**

SECTION B ANSWER ANY TWO QUESTIONS IN THIS SECTION

QUESTION 4

- a) Outline the measures that can be taken to ensure personal hygiene standards are met. **[10 marks]**
- b) Discuss the benefits of an HACCP-based food safety program. **[10 marks]**

QUESTION 5

You have been tasked with designing the following products for the Gwanda State University canteen:

- (i) Sour porridge from pearl millet.
- (ii) Smoked goat sausages.
- (iii) Biltong.
- (iv) Fermented milk.

Discuss the safety threats and measures for these products.

[20 Marks]

QUESTION 6

Analyse the various methods used to store and preserve food materials in rural Zimbabwe.

[20 Marks]

END OF EXAMINATION PAPER