

**NATIONAL UNIVERSITY OF LESOTHO
FACULTY OF AGRICULTURE
DEPARTMENT OF ANIMAL SCIENCE**

SECOND SEMESTER EXAMINATION

ANS 4506 - LIVESTOCK PRODUCTS & PROCESSING

JUNE, 2023

MARKS: 100

TIME: 3 HOURS

INSTRUCTION:

- Answer all questions
- Start each question on a new page

Question 1

- a) Describe with examples the following terms as applied in food processing:
- i. Livestock by-products
 - ii. Antioxidant
 - iii. Cold shortening
 - iv. Hydrolytic rancidity
 - v. Dairy system
- [15]
- b) The quality of raw material used in food processing determines the quality of the final product. Discuss any two most important rapid tests that can be used to assess milk quality upon reception at the Milk Collection Centre.
- [10]

Question 2

- a) Ensuring product safety and quality is one of the primary focuses of the food processing industry. Describe at least five (5) factors that influence the keeping quality of the processed livestock products.
- [15]
- b) One of the key activities towards food safety is the destruction of micro-organisms in food products. However, micro-organisms can also be utilized to ensure production of safe food. Explain how micro-organisms can in-turn be used to ensure safety of processed foods.
- [10]

Question 3

- a) Compare and contrast hanging of the carcass from the Achilles tendon versus hanging from the aitch bone (pelvic suspension).
- [4]
- b) Describe any four (4) important biochemical processes in fresh meat processing.
- [20]

Question 4

- a) Explain how fatty acid composition of milk can be utilized as a tool for milk quality assessment.
- [10]
- b) Milk is composed of a number of components which make it distinctively a complete dietary product. Milk fat and protein are among the most important components because they determine the market price. Describe four (4) important components of whey protein and four components of milk lipids (4).
- [16]