UNAM
UNIVERSITY OF NAMIBIA

FACULTY	AGRICULTURE, ENGINEERING AND NATURAL SCIENCES		
SCHOOL	AGRICULTURE AND FISHERIES SCIENCES		
DEPARTMENT	FOOD SCIENCE AND SYSTEMS		
SUBJECT	MEAT SCIENCE AND TECHNOLOGY		
SUBJECT CODE	F3611SM		
DATE	JUNE 2025		
DURATION	3 HOURS	**MARKS**	100

First Opportunity Examination

Examiner: Dr. S.C. Barrion

Internal Moderator: Mr. S. Emvula

External Moderator: Prof. V.A. Jideani

This examination consists of one **(1)** page excluding this front page.

Instructions

Answer all five (5) questions

QUESTION 1

a) Provide five (5) examples of micro-organisms responsible for meat spoilage and identify five (5) specific symptoms of spoilage associated with each micro-organism. **[10]**

b) Examine the applications of chilling and freezing processes in the preservation of meat. **[10]**

QUESTION 2

a) Discuss the size reduction technologies used in meat processing. **[10]**

b) Provide short notes on:
i) Mechanical stunning **[3]**
ii) Electrical stunning **[3]**
iii) Anaesthetic stunning **[4]**

QUESTION 3

a) In the production of boerewors, distinguish between the preliminary processing and post processing steps. Include a flow diagram to illustrate your answer. **[10]**

b) Explain the process of smoking meat and discuss the various stages involved in the smoking process. **[10]**

QUESTION 4

a) Discuss the factors that affect the growth and development of meat animals. **[10]**

b) Identify and briefly describe six (6) general types of major skeletal muscles. **[10]**

QUESTION 5

a) Explain the purpose for killing (sticking and bleeding) in the process of slaughtering animals. Discuss the significance of ensuring humane treatment and meat quality. **[10]**

b) Compare and Contrast PSE and DFD meat. Discuss the causes and physiological processes behind each condition. **[10]**

END OF THE EXAMINATION