FACULTY OF LIFE SCIENCES

DEPARTMENT OF ANIMAL SCIENCES

BACHELOR OF SCIENCE HONOURS DEGREE IN ANIMAL SCIENCE

Animal Products Processing

LAS 4112

Final Examination

February 2022

This examination paper consists of 3 pages

Time Allowed: **3 hours**

Total Marks: **100**

Special Requirements: **None**

Examiner's Name: **Dr S. Moyo**

INSTRUCTIONS

1. Answer **all** questions in Section A

2. Answer **only Two** questions in Section B

MARK ALLOCATION

QUESTION	MARKS
SECTION A	60
SECTION B	40
TOTAL ATTAINABLE MARKS	**100**

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SECTION A: ANSWER <u>ALL</u> QUESTIONS IN THIS SECTION

QUESTION 1

    a)   Explain the following terms as they are used in Animal Product Processing:

    i.   Exsanguination;   [2]

    ii.   Hypertrophy;   [2]

    iii.   Myoglobin;   [2]

    iv.   Rigor mortis;   [2]

    v.   Hyperplasia.   [2]

  b) List any three causes of spoilage in animal flesh.   [3]

    c)   Discuss how pale, soft and exudative (PSE) and dark Dry firm develops in meat.
    [6]

    d)   Packaging in animal products and processing is imperative. Why?
    [3]

    e)   Describe the manufacturing process of leather.
    [10]

    f)   List three important attributes that enable industrial processing of eggs possible.
    [3]

QUESTION 2

  a) Explain how the Haugh unit is determined in egg industry.   [5]

  b) What is the purpose of a Hazard Analysis Critical Control Point (HACCP) system
    in the food processing plant?   [5]

QUESTION 3.

  Discuss the two religious slaughter methods

    i.   Haalal   [5]

    ii.   Kosher/Shechita).   [5]

QUESTION 4

Dark, firm and dry DFD meat is generally considered unattractive to the consumer. List any 5 causes of DFD that should be avoided in meat industry. [5]

SECTION B: ANSWER <u>ANY TWO</u> QUESTIONS IN THIS SECTION

QUESTION 5

Write briefly on the significance of the following in milk industry:

    i.   Somatic cell count; [5]

    ii.   Total bacteria count; [8]

    iii.   Residues in milk. [7]

QUESTION 6

a) Meat colour is significant to consumer acceptance of products. Discuss factors that affect meat colour and how discolouration can be prevented. [20]

QUESTION 7

a) Write detailed notes on the following topics:

    i.   Pasteurisation; [3]

    ii.   Sterilisation; [3]

    iii.   Homogenised milk. [4]

b) Describe how Ultimate pH influences meat quality. [10]

END OF EXAMINATION