BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF AGRICULTURE AND ENVIRONMENTAL SCIENCE

AGA 414 [2]

Department of Animal Science
BSc (Honours) Animal Health and Production Extension
Part 4 Examination
Meat Science

3 HOURS (100 Marks)
INSTRUCTIONS

JUN 2023

Answer any *FOUR* questions. Each question carries **25 marks.**

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1. Describe the process of conversion of muscle to meat **[25 marks]**

2. Discuss how the following factors affect meat quality:
   a) pH. **[4 marks]**
   b) Age. **[4 marks]**
   c) Breed. **[4 marks]**
   d) Pre- slaughter stress. **[13 marks]**
3. Discuss how one would implement a HCCP plan at beef abattoir. **[25 marks]**
4. Explain how the following coordinates of the Commission International De I' Eclairage (CIE)" colour system (CIE, 1976) are used to measure meat quality:

   a) L* **[9 marks]**

   b) a* **[8 marks]**

   c) b* **[8 marks]**

5. a) Describe the process involved in the meat preservation methods listed below:
   i) Canning. **[5 marks]**
   ii) Freezing. **[5 marks]**

   b) State and explain the five freedoms in animal welfare. **[15 Marks]**

6. Discuss how animal welfare can be measured in slaughter animals **[25 Marks]**

End of Exam Paper