"Investing in Africa's future"

COLLEGE OF HEALTH AGRICULTURE AND NATURAL SCIENCES

NAAS 212: ANIMAL PRODUCTION
END OF FIRST SEMESTER EXAMINATION
NOVEMBER 2025
LECTURER: DR. S. CHAKEREDZA
DURATION: 3 HRS

<u>**INSTRUCTIONS**</u>

Answer all questions in Section A and any **three** from Section B

Section A carries **40 marks** and each question in section B carries **20 marks**.

SECTION A: Answer **ALL** questions.

Question one
   a. Define smallholder livestock production and explain its role in rural livelihoods.   [6]
   b. What is mixed crop-livestock farming, and why is it common in developing regions?   [3]
   c. Explain the concept of "livestock productivity" and list two indicators used to measure it.   [3]
   d. Describe three constraints to animal production in developing countries.   [9]
   e. Use the Pearson square method to formulate a concentrate with 16 % Crude Protein and give the values you will use in the final mixture of Cottonseed meal (49 % CP) and maize meal (9.6 %). Please show your working.   [9]

   f. Describe how the Pearson Square method is used to formulate a ration with more than two ingredients. Cottonseed meal (49 % CP) and maize meal (9.6 %) and wheat meal 7 % CP.   [10]

SECTION B: Answer **ANY THREE (3)**

Question two
Describe the importance of livestock in food security and nutrition in low-income households.   [20]

Question three
Discuss the impact of climate change on livestock production in semi-arid regions.   [20]

Question four
Evaluate the role of animal traction in smallholder agricultural systems.   [20]

Question five
Compare intensive and extensive livestock production systems in terms of inputs, outputs, and sustainability.   [20]

Question six

Assess the challenges of feed availability and quality in dry seasons and propose practical solutions. [20]

END OF QUESTION PAPER!!!

[20]