



COLLEGE OF HEALTH, AGRICULTURE AND NATURAL SCIENCES

DEPARTMENT OF AGRICULTURAL SCIENCES

END OF SECOND SEMESTER FINAL EXAMINATION

COURSE NAAS307: DAIRY PRODUCTION

APRIL/MAY 2024

DURATION: THREE (3) HOURS

INSTRUCTOR: DR. D. CHIKWANDA

INSTRUCTION TO CANDIDATES

Answer ALL questions in **section A** and any three questions in **section B**.

SECTION A: Answer **all** questions.

Question 1

- a. Explain the following terms:
 - i) Ketosis. [2]
 - ii) Total mixed ration. [2]
- b. Highlight:
 - i) The importance of heat detection in dairy cow management. [3]
 - ii) The importance of the streak cup milk test. [4]
- c. Outline:
 - i) The benefits of electronic ear-tagging in dairy production. [3]
 - ii) The milking routine. [4]
- d. Explore the advantages of record keeping in a dairy enterprise. [4]
- e. Describe:
 - i) The herringbone milking parlour. [4]
 - ii) The basic elements and components of a milking machine. [6]
- f. 'Culling is a critical management operation in dairy production.' Elaborate. [8]

SECTION B: Answer any **three** questions from this section.

Question 2

Discuss the causes of mastitis on a dairy farm. [20]

Question 3

With the aid of a diagram, explore the relationships among milk yield, dry matter intake and live-weight in dairy cows from early lactation to the dry cow phase. [20]

Question 4

Discuss calf feeding management from birth to weaning. [20]

Question 5

- a. Clarify the importance of milk quality in milk processing. [8]
- b. Explore the advantages and disadvantages of pasture-based dairy feeding systems. [12]

Question 6

- a. Explain the roles of ligaments found in the udder of a cow. [6]
- b. Outline the importance of artificial insemination in dairy cattle breeding management. [6]
- c. Elaborate the advantages and disadvantages of a rotary milking parlour. [8]

END OF QUESTION PAPER!!!