



*“Investing in Africa’s future”*

**COLLEGE OF HEALTH, AGRICULTURE AND NATURAL  
SCIENCES**

**NAAS 301: RUMINANT ANIMAL PRODUCTION**

**END OF SECOND SEMESTER FINAL EXAMINATIONS**

**APRIL 2023**

**LECTURER: DR. S. CHAKEREDZA**

**DURATION: 3 HOURS**

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**INSTRUCTION**

Answer All Questions from Section A

And Answer Three Questions from Section B

### **Section A (answer all, possible marks 40)**

1. Discuss on the shortcomings of the proximate scheme of livestock feed analysis [5]
2. Why are ruminants more suitable to utilizing low quality forages: Discuss [5]
3. In formulating energy requirements for animals what is the difference between using metabolisable and net energy: Base your argument by evaluating the energy partitioning in animals [10]
4. In looking at the value chain of milk discuss which aspects need quality assessment and justify your reasons [10]
5. What are the legal components of milk quality in Zimbabwe [10]

### **Section B (Choose any 3, maximum possible marks 60)**

1. Using the Pearson Square formulate a concentrate to have 14 % CP portion using three ingredients: soyabean meal 45 % CP, Maize meal 8.9 % CP and wheat meal 10 % CP. Clearly show your working. [20]
2. Discuss in order of priority how you would allocate feed to your stock running a farm taking into account productive state, nutrients available, ration formulation, quality control, monitor performance and also take account of non-nutritional aspects [20]
3. Give an overview of sheep production management calendar paying particular emphasis to management requirements [20]
4. Tracing the graphs on cow body weight, milk production, dry matter intake changes discuss your advice to a dairy man on what they should be wary of

the lactation cycle

[20]

5. Discuss of the factors you take into account in before you embark on  
commercial sheep or goat production [20]
6. Discuss pen finishing of lambs and kids [20]

**END OF EXAMINATION PAPER**