



**“Investing in Africa’s Future”**

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

**NAAS211: AGRICULTURAL BIOCHEMISTRY**

**END OF SECOND SEMESTER FINAL EXAMINATIONS**

**DATE: APRIL 2023**

**LECTURER: DR. S. CHAKEREDZA**

**DURATION: 3 HOURS**

**INSTRUCTIONS TO CANDIDATES**

Answer All Questions from Section A,  
Answer Three Questions from Section B

**Section A Answer ALL questions.**

1. Define the term Biochemistry. [5]
2. What are the nutrients a cell needs to be productive? [5]
3. Draw a simplified diagram of an animal cell. Label the following: cytoplasm, smooth endoplasmic reticulum, rough endoplasmic reticulum, mitochondria. [10]
4. Differentiate between an animal and a plant cell. [10]
5. In enzyme inhibition define and explain reversible and irreversible inhibition. [10]

**Section B: Answer 3 Questions**

6. a) Give a definition of an enzyme and its function. [5]  
b) Discuss factors that influence enzyme function. [15]
7. Discuss the general functions of proteins. [20]
8. Describe photosynthesis, its importance and the linkage with climate change. [20]
9. In cell metabolism list and explain the key pathways and give their end-products. [20]
10. Discuss how the animal body regulates metabolism. [20]

**END OF EXAMINATION PAPER**