



AFRICA
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COLLEGE OF HEALTH AGRICULTURE AND NATURAL SCIENCES

NAAS 211: AGRICULTURAL BIOCHEMISTRY
END OF FIRST SEMESTER EXAMINATION
NOVEMBER 2025

LECTURER: DR. S. CHAKEREDZA
DURATION: 3 HRS

INSTRUCTIONS

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 1

- a. What are the nutrients needed by a cell to be productive. [5]
- b. Define the term “Biochemistry”. [5]
- c. Draw a simplified diagram of an animal cell. Label the following: cytoplasm, smooth endoplasmic reticulum, rough endoplasmic reticulum, mitochondria. [10]
- d. Differentiate between an animal cell and a plant cell. [10]
- e. In enzyme inhibition, explain reversible and irreversible inhibition. [10]

Section B: Answer 3 Questions

Question 2

Describe the biochemical process of photosynthesis and its significance in crop production.

[20]

Question 3

- a) Give a definition of an enzyme and its functions.
- b) Discuss the factors influencing enzyme function.

[8]

[12]

Question 4

Discuss the general functions of proteins.

[20]

Question 5

In cell metabolism, explain the key pathways and give their end-products.

[20]

Question 6

Discuss how the animal body regulates metabolism.

[20]

END OF QUESTION PAPER!!!