



"Investing in Africa's Future"

COLLEGE OF HEALTH, AGRICULTURE & NATURAL SCIENCES

NAAS 211: AGRICULTURAL BIOCHEMISTRY

END OF SECOND SEMESTER SPECIAL EXAMINATIONS

AUGUST 2023

LECTURER: DR. S. CHAKEREDZA

DURATION: 3 HOURS

INSTRUCTION

Choose and Answer **Any Four** Questions

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Question One

- a) What are the nutrients a cell needs to be productive? [5]
- b) Draw a simplified diagram of an animal cell. Label the following: cytoplasm, smooth endoplasmic reticulum, rough endoplasmic reticulum, mitochondria. [10]
- c) Compare and contrast animal and plant cell. [10]

Question 2

- a) Give a definition of an enzyme and its functions. [10]
- b) What factors influence enzyme function? [15]

Question 3

- a) In enzyme function describe and explain reversible and irreversible inhibition. [10]
- b) What are the general functions of proteins ? [15]

Question Four

- a) Define and explain the roles of DNA, mRNA, and tRNA. [10]
- b) Discuss how the animal body regulates metabolism. [15]

Question 5

- a) Describe photosynthesis, its importance and the linkage with climate change. [20]
- b) List the five nitrogen bases found in nucleotides. [5]

Question 6

- In metabolism list and explain the key pathways. [25]

END OF EXAMINATION PAPER