



**AFRICA
UNIVERSITY**
A United Methodist-Related Institution

"Investing in Africa's future"

**COLLEGE OF HEALTH AGRICULTURE AND NATURAL SCIENCES
(CHANS)**

AAS 201 : BIOCHEMISTRY

END OF SECOND SEMESTER FINAL EXAMINATIONS

APRIL/MAY 2019

LECTURER:

DURATION: 3 HRS

INSTRUCTIONS

Answer any **FIVE** questions

All questions carry equal marks (20).

DO NOT repeat material.

Write legibly.

Biochemistry

3 hours (100 Marks)

INSTRUCTIONS

Answer any FIVE questions. Each question carries 20 marks

1. a) Give the characteristics of the following elements Compare and contrast the following:
 - i. Carbon [4]
 - ii. Oxygen. [4]
 - iii. Hydrogen [4]
- b) Illustrate the structure of glucose and fructose in the straight chain and ring forms [8]
2. Giving 2 examples for each:
 - i. Class classify carbohydrates according to number of sugar units [10]
 - ii. Classify CHOs according to number of carbon atoms [10]
3. a) Illustrate the general structure of an amino acid [5]
- b) Classify amino acids with respect to the side chain [15]
4. What do you understand by the following?
 - a) Chiral carbon.
 - b) Glycosidic bond
 - c) Saturated and unsaturated fats
 - d) Fats and oils. [20]
5. Compare and contrast:
 - a) Aldose vs ketose
 - b) Pyran vs furan
 - c) Hemiacetal vs hemiketal
 - d) Glucose vs fructose [20]
6. a) Illustrate the general structure of an amino acid [5]
- b) Give the general functions of proteins [15]
7. Briefly describe the process of transcription and translation as they relate to protein synthesis. [20]

END OF PAPER