

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE

BIOC 417: MEDICAL BIOCHEMISTRY II

STREAMS: BSC BIOC

TIME: 2 HOURS

DAY/DATE: TUESDAY 29/08/2023

8.30 A.M. – 10.30 A.M

INSTRUCTIONS

- Answer Question ONE and any TWO questions.
- Do not write on the question paper.

QUESTION ONE: (30 MARKS)

Instructions: Answer all the questions

- Define the following terms indicating the cause for each.
 - Rouleaux formation
 - Post-renal azotemia
 - Phenylketonuria (2x3 marks)
- Describe the causes, symptoms and complications associated with polycythaemia vera.. (7 marks)
- High quality clinical specimens are required to achieve accurate and clinically relevant results.
 - Citing examples, explain the precautions necessary for selecting, collecting and transport of cerebrospinal fluid (CSF) for clinical biochemistry examination. (7 marks)
 - List major biochemical changes which may occur in urine specimens stored at room temperature. (5 marks)
- Outline any clinical procedure used to determine urea levels in the body fluids. (5 marks)

QUESTION TWO: (20 MARKS)

- Discuss biochemical basis, clinical diagnosis and management of Tyrosinemia. (10 marks)
- Outline the relevance and techniques of blood compatibility testing. (10 marks)

QUESTION THREE: (20 MARKS)

- Explain the principle of uric acid determination in clinical biochemistry laboratory. (10 marks)

(b) Under what conditions are serum levels of uric acid elevated in human? (10 marks)

QUESTION FOUR: (20 MARKS)

(a) Discuss in details laboratory diagnosis of myocardial infarction. (10 marks)

(b) Describe Lactate dehydrogenase isoenzymes and their diagnostic significance. (10 marks)
