



KISII UNIVERSITY

UNIVERSITY EXAMINATIONS

SPECIAL/SUPPLEMENTARY EXAMINATIONS

SECOND YEAR EXAMINATION FOR THE AWARD OF THE DEGREE OF BACHELOR OF SCIENCE IN EDUCATION SCIENCE

SECOND SEMESTER, 2022/2023

(NOVEMBER/DECEMBER, 2022)

BIOC 204: BIOCHEMISTRY

STREAM: Y2 S2

TIME: 2 HOURS

DAY: WEDNESDAY, 2:00 – 4:00 P.M.

DATE: 23/11/2022

INSTRUCTIONS

- 1. Do not write anything on this question paper.*
- 2. Answer ALL the questions in section A [Compulsory] and any other TWO Questions from section B.*

SECTION A : COMPULSORY (40MARKS)

- Briefly describe the structural levels of protein organization. (5 Marks)
- Explain factors affecting the rate of enzyme activity. (5 Marks)
- Give the structures of
 - ∞ D-glucosyl(1-4) ∞ - D glucose
 - Peptide bond
 - Ribose
 - Glucose
 - 2-amino 6 – oxypurine
- Describe the mechanism of enzyme action (5 Marks)
- What are coenzymes? Briefly describe the role of coenzymes in enzyme action. (5 Marks)

6. Briefly explain geometric isomerism in unsaturated fatty acid depending on the orientation of groups around the double axis. (5 Marks)
7. Differentiate between reducing disaccharides and non-reducing disaccharides giving suitable examples. (5 Marks)

SECTION B : ANSWER ONLY TWO QUESTIONS (30 MARKS)

8. Discuss the classification of amino acids along with their structures. (5 Marks)
9. Explain the key control steps in glycolysis. (5 Marks)
10. Briefly describe the chemistry, biochemical functions, sources and deficiency manifestations of vitamin C. (5 Marks)