



AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF PUBLIC HEALTH
DEPARTMENT OF COMMUNITY HEALTH
BACHELOR OF SCIENCE IN COMMUNITY HEALTH
END OF SEMESTER EXAMINATION SEPTEMBER -DECEMBER 2022

CHP 125: Biochemistry

Date: 7th December 2022

Time: 2 hours

Start: 11.00 AM

Stop: 1.00 PM

INSTRUCTIONS

1. This exam is marked out of 70 marks
2. This Examination comprises TWO Sections
Section A: Compulsory Question (30 Marks)
Section B: Long Answer Questions (40 Marks)
3. All questions in Section A are compulsory and Answer any TWO questions in Section B
4. No movement is allowed during the examination
5. Any aspect of cheating detected during and or after the exam administration will lead to the nullification of your exam.
6. Do not write on the question paper

SECTION A: SHORT ANSWER QUESTIONS. ANSWER ALL QUESTIONS

(30 Marks)

1. Describe the structure and function of any three cellular components. (6 Marks)
2. Describe the three (3) main physical properties of fatty acids. (6 Marks)
3. Highlight any three functions of nucleotides (6 Marks)
4. Distinguish between sucrose and lactose from the structural standpoint) (3 Marks)
5. Outline any three functions of vitamin D (3 Marks)
6. Using examples give examples of three biomolecules, their monomers and polymers found in the cell. (6 Marks)

SECTION B: LONG ANSWER QUESTIONS. ANSWER ANY TWO QUESTIONS

(40 Marks)

7. Explain the following terms
 - a.
 - i. An enzyme activator (3 Marks)
 - ii. An enzyme inhibitor (3 Marks)
 - iii. Allosteric effector (4 Marks)
 - b. With appropriate examples explain the differences between the primary, secondary, tertiary and quaternary structures of proteins (10 Marks)
8. Describe five various ways in which enzyme activity may be affected in the living cells (20 Marks).
9. Describe five major functions of hormones in the body. Use an example in each case (20 Marks).