



**AMREF INTERNATIONAL UNIVERSITY  
SCHOOL OF PUBLIC HEALTH  
DEPARTMENT OF COMMUNITY HEALTH  
BACHELOR OF SCIENCE IN COMMUNITY HEALTH  
SPECIAL/SUPPLEMENTARY EXAM, MARCH 11<sup>TH</sup>-15<sup>TH</sup> MARCH 2024**

**CHP: 125: Biochemistry**

**Date: Thursday 14th March 2024**

**Time: 2 hours**

**Start: 4.30**

**Stop: 6.30 am**

**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. This online exam shall take 2 Hours
5. Late submission of the answers will not be accepted
6. Ensure your web-camera is on at all times during the examination period
7. No movement is allowed during the examination
8. Idling of your machine for 5 min or more will lead to lock out from the exam
9. The Learning Management System (LMS) has inbuilt integrity checks to detect cheating
10. Any aspect of cheating detected during and or after the exam administration will lead to nullification of your exam
11. In case you have any questions call the invigilator on Head of Department on Tel +254720573449 or Ag Head of Department +254723742370
12. For adverse incidences please write an email to: [amiu.examinations@amref.ac.ke](mailto:amiu.examinations@amref.ac.ke)

**SECTION A: SHORT ANSWER QUESTIONS.**

**ANSWER ALL QUESTIONS (30 Marks)**

1. Outline four functions of the cell membrane (4 Marks)
2. State five chemical properties of fatty acids. (5 Marks)
3. Highlight five functions of hormones (5 Marks)
4. Outline three classes of hormones based on proximity of site of synthesis to site of action (3 Marks)
5. Give three examples of biomolecules, their monomers and polymers found in the cell. (3 Marks)
6. Highlight how calcium and phosphorus levels are regulated in a human body (5 Marks)
7. Outline any five functions of carbohydrates (5 Marks)

**SECTION B: LONG ANSWER QUESTIONS.**

**ANSWER ANY TWO QUESTIONS**

**(40 Marks)**

8. Discuss the process of glycolysis as a biochemical process that takes place in the body (20 Marks).
9. Explain the following terms
  - a. An enzyme activator (3 Marks)
  - b. An enzyme inhibitor (3 Marks)
  - c. Allosteric effector (4 Marks)
  - d. Discuss the structure of primary, secondary, tertiary and quaternary structures of proteins (10 Marks)
10. Describe various five ways in which enzyme activity may be affected in the living cells (20 Marks).