



THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

A. M. E. C. E. A

MAIN EXAMINATION

JANUARY – APRIL 2015 TRIMESTER

FACULTY OF SCIENCE

DEPARTMENT OF NATURAL SCIENCES (BIOLOGY)

SCHOOL FOCUSED PROGRAMME

BIO 100: GENERAL BIOLOGY

P.O. Box 62157
00200 Nairobi - KENYA
Telephone: 891601-6
Fax: 254-20-891084
E-mail: academics@cuea.edu

Date: April 2015	Duration: 2 Hours
Instructions: Answer Question ONE and any other TWO Questions.	

- Q1. a) Using relevant examples, differentiate between polysaccharides and monosaccharides. **(2 marks)**
- b) Outline the steps you would follow to obtain a pure enzyme from a bacterial cell. **(6 marks)**
- c) Differentiate between lock and key theory and induced fit theory. **(3 marks)**
- d) Illustrate the role of enzymes in biological reactions. **(4 marks)**
- e) State the location at the following reactions: -
i) Glycolysis
ii) Photophosphorylation
iii) Krebs Cycle
- f) Explain the steps in the scientific method. **(6 marks)**
- g) Differentiate between the following terms: -
i) Light dependent and light independent reactions of photosynthesis
ii) Protosystem I and photosystem II
iii) Coenzyme and cofactor **(6 marks)**
- Q2. Describe the light dependent and light independent reactions in photosynthesis. **(20 marks)**
- Q3. Explain classification, structure and function of proteins. **(20 marks)**

Q4. Compare and contrast prokaryotes and Eukaryotes.

(20 marks)

Q5. Explain the theories relevant in modern biology.

(20 marks)

END