THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

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MAIN EXAMINATION

JANUARY – APRIL 2015 TRIMESTER

FACULTY OF SCIENCE

DEPARTMENT OF NATURAL SCIENCES (BIOLOGY)

REGULAR PROGRAMME

BIO 309: IMMUNOLOGY

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

Q1. a) Define:
- i) Opsonin
- ii) Hapten
- iii) Hypersensitivity
- iv) Immunoglobutins

(4 marks)

b) i) Define phagocytosis in contex of immunology.

(2 marks)

ii) Explain the process of phagocytosis briefly using diagram.

(8 marks)

c) Explain the differences between Addaptive immunity and non-specific immunity.

(4 marks)

d) Define immunization and explain the two main ways that it can be acquired.

(4 marks)

e) List the THREE main characteristics of antibody response.

(3 marks)

f) Explain the two term as used in immunology.
- i) Affinity **(2 marks)**
- ii) Avidity **(2 marks)**

g) What contributions did the following have in immunology
- i) Edward Jenner
- ii) Robert Koch

(1 mark)

Q2. Hypersensitivity refers to excessive, undesirable reactions produced by normal immune systems: Explain the types of Hypersensitivity reaction.

(20 marks)

Q3. Explain the procedures followed to enhance Graft survival and strategies for successful transplantation.

(20 marks)

Q4. Clearly describe the structure, properties and the clinical implication of human immunoglobulin classes.

(20 marks)

Q5. Clearly describe the process of immune cell formation right from the Bone Marrow upto the point of cell differentiation.

(20 marks)

END