

**TECHNICAL UNIVERSITY OF MOMBASA**

Faculty of Applied and Health Sciences

**DEPARTMENT OF ENVIRONMENT AND HEALTH SCIENCES**

UNIVERSITY EXAMINATION OF DEGREE

BACHELOR OF SCIENCE IN COMMUNITY HEALTH (BSCH14S)

AML 4121: FUNDAMENTALS OF IMMUNOLOGY

END OF SEMESTER EXAMINATIONS (PAPER 1)

SERIES: JANUARY 2016

TIME: 2 HOURS

**INSTRUCTION TO CANDIDATE**

This paper consists of **FIVE QUESTIONS**.

Answer QUESTION 1 (COMPULSORY) and any OTHER two.

**QUESTION ONE (30marks)**

- a) Explain the following terms:
  - i. Antigen(2marks)
  - ii. Phagocytosis(2marks)
  - iii. Toxoid(2marks)
  - iv. Autograft(2marks)
  - v. Immunogenicity(2marks)
  
- b) State the four characteristics a substance must possess in order to be immunogenic (4marks)

- c) State the two functions of the secondary lymphoid organs (2marks)
  
- d) Define Immunization, and differentiate between active immunization and passive immunization (6marks)
  
- e) Name the two major types of cells that participate as effector cells in adaptive immunity (2marks)
  
- f) Define inflammation and its hall mark signs (6marks)

## **QUESTIONS TWO**

- a) Discuss the different cell types and functions in innate immunity (12marks)
- b) Explain the mechanism of humoral and cell mediated immune response to virus (8marks)

## **QUESTION THREE**

Discuss Innate and Adaptive Immune System and, state their major properties (20marks)

## **QUESTION FOUR**

- a) Discuss the four types of hypersensitive reactions (10marks)
- b) Discuss the various gradations in relationships of transplantation from donor to recipient. (10marks)

## **QUESTION FIVE**

- a) Discuss the process of phagocytosis in the killing of micro-organism (12marks)
- b) Discuss the major classes of Antigen (8marks)