



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2011/2012

FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN MICROBIOLOGY

SBT 446: CELLULAR IMMUNOLOGY

DATE: WEDNESDAY, 30TH NOVEMBER 2011

TIME: 4.30 P.M. – 6.30 P.M.

INSTRUCTIONS.

Answer **ALL** Questions in **section A** and **ANY ONE** Question in **section B**. Answers to Question A should be concise and should be written in the spaces provided in the Question Paper.

SECTION A Short Answer Questions (5-marks each).

1. Explain why Graft rejection is immunological.

2. Briefly state how T and B lymphocytes attain immunological tolerance.

3. Describe the process of B cell activation by T-dependent Antigens.

4. Explain the role of NK cells, cytotoxic T cells and macrophages in destroying tumour cells.

5. What are the differences between Antibodies and Cytokines?

6. Describe the mechanism of type 2 hypersensitivity reaction.

7. Explain the mechanism of intracellular killing by activated macrophages through oxygen dependent microbicidal activity.

8. Describe two ways in which NK cells effect immune protection.

SECTION B Answer ONE Question only in the answer booklet provided (30 Marks Each).

1. Describe the mechanism of type 1 and type IV (T-delayed type) hypersensitivity reactions.
2. Giving appropriate examples discuss causes of autoimmune diseases and their treatment.
3. Discuss cell mediated and humoral immunity mechanism of graft rejection and four ways in which the rejection can be minimized.
