

**W1-2-60-1-6**

**JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY**

# **UNIVERSITY EXAMINATIONS 2014/2015**

**THIRD YEAR SECOND SEMESTER EXAMINATION FOR THE DEGREE OF SCIENCE IN MEDICAL MICROBIOLOGY**

**SZL 2336 : BASICS OF IMMUNOLOGY**

**DATE: DECEMBER 2014 TIME: 2 HOURS**

**INSTRUCTIONS:**

**ANSWER QUESTION ONE AND ANY OTHER TWO QUESTIONS**

**USE WELL ANNOTATED SKETCHES FOR ILLUSTRATIONS**

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**QUESTION ONE**

1. Outline the properties and functions of natural killer cells [6 marks]
2. Discuss briefly type I hypersensitivity [6 marks]
3. Describe various types of grafts [6 marks]
4. Differentiate between T cells and B cells
5. Explain the consequences of carrying out thymectomy and splenectomy in a host to its immune system [6 marks]

**QUESTION TWO**

1. Discuss factors that determine immunogenicity of antigens [10 marks]
2. Explain immunologic ways of antigen elimination in a host [10 marks]

**QUESTION THREE**

Discuss antigen processing and presentation [20 marks]

**QUESTION FOUR**

Describe alternative complements response to antigens. [20 marks]