



MACHAKOS UNIVERSITY COLLEGE

(A Constituent College of Kenyatta University)
University Examinations for 2015/2016 Academic Year

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF
EDUCATION (SCIENCE)

SZL 307 FUNDAMENTALS OF IMMUNOLOGY EXAMINATION

DATE: 9/8/2016

TIME: 8.30-10.30 AM

INSTRUCTIONS:

- The paper consists of **two** sections.
- Section **A** is **compulsory**.
- Answer any **two** questions from section **B**.

SECTION A (30 MARKS)

Answer all questions

1. a) Briefly explain the characteristics of the adaptive immunity (5 marks)
b) Outline the roles of the spleen in immunity (3 marks)
c) Outline the functions of the cells that mature in the thymus (3 marks)
d) Explain antibody dependent cellular cytotoxicity (3 marks)
e) Briefly explain ways how antibodies protect the body (4 marks)
f) Suggest 3 ways in which a person can passively acquire immunity (3 marks)
g) Briefly explain type III hypersensitivity (3 marks)
h) State the importance of using repository adjuvant (2 marks)
i) What is the role of normalflora in the innate immunity (4 marks)

SECTION B(40 MARKS)

ANSWER ANY TWO QUESTIONS

2. a) Explain how innate immunity differs from adaptive immunity (10 marks)
b) Outline the differences between immediate and delayed type hypersensitivity (10 marks)
3. a) Using a well labeled diagram, illustrate an immunoglobulin molecule and explain the role of antibodies in body defence (15 marks)
b) Write short notes on IgA (5 marks)
4. a) Discuss the complement fixation test (13 marks)
b) Discuss the factors responsible for the retention of the foetus (4 marks)
c) Outline the effects of neonatal thymectomy (3 marks)
5. a) Write short notes on types of transplant (8 marks)
b) Briefly describe systemic lupus erythromatosus (8 marks)
c) Explain the role of the skin and mucous membranes in immunity (4 marks)