



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
SCIENCE IN POPULATION HEALTH

PPH 220: IMMUNOLOGY OF ENVIRONMENTAL HEALTH DISEASES

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 ONE (COMPULSORY)

1. a) Briefly explain the characteristics of the adaptive immunity (4 marks)
b) Briefly explain respiratory hypersensitivity (4 marks)
c) Describe three categories of immunodeficiency. (3 marks)
d) explain antibody dependent cellular cytotoxicity (3 marks)
e) Outline the main features of a good vaccine. (5 marks)
f) State the importance of using repository adjuvant (2 marks)
g) Briefly describe four types of cytokines (4 marks)
h) Write short notes on systemic lupus erythromatosus (5 marks)

SECTION B

(ANSWER ANY TWO QUESTIONS)

2.
 - a) Suggest 4 ways in which a person can acquire immunity (4 marks)
 - b) Discuss the complement fixation test (16 marks)

3.
 - a) Briefly explain 4 ways in which antibodies protect the body (4 marks)
 - b) Explain how innate immunity differs from adaptive immunity (16 marks)

4.
 - a) What is the role of normal flora in the innate immunity (4 marks)
 - b) Outline the differences between delayed and immediate type hypersensitivity (16 marks)

5.
 - a) Explain the role of physical and mechanical barriers in innate immunity. (4 marks)
 - b) Discuss the main constraints of vaccination (16 marks)