



MACHAKOS UNIVERSITY

University Examinations 2018/2019

SCHOOL OF HEALTH SCIENCES

DEPARTMENT OF PUBLIC AND COMMUNITY HEALTH

SECOND YEAR SPECIAL/SUPPLEMENTARY FOR

BACHELOR OF SCIENCE IN PUBLIC HEALTH.

PPH 221: IMMUNOLOGY OF ENVIRONMENTAL HEALTH DISEASES

DATE: 24/7/2019

TIME: 2.00-4.00 PM

INSTRUCTIONS This paper consists of two sections A and B

Section A is compulsory

Section B choose any two (2) questions

SECTION A: COMPULSORY

QUESTION ONE (30 MARKS)

- a) Define the following terminologies (3 marks)
 - i. Antibody
 - ii. Immune system
 - iii. Antigen
- b) Identify various types of antibodies (3 marks)
- c) Outline factors which promote good immunity (3 marks)
- d) Briefly explain the main types of vaccines (3 marks)
- e) Explain the importance of Basophils in immunity (3 marks)
- f) Differentiate between Innate and Acquired immunity (3 marks)
- g) Briefly describe the environmental factors effects on hypersensitivity (3 marks)
- h) Identify various autoimmune diseases (3 marks)
- i) Differentiate between hypersensitivity and autoimmune diseases (3 marks)

- j) State ways in which one can boost immunity of children and the aged (3 marks)

SECTION B: ANSWER ANY TWO QUESTIONS. EACH QUESTION CONTAINS 20 MARKS

QUESTION TWO (20 MARKS)

- a) Explain the importance of cytokines and receptor cells in immunity (10 marks)
b) Describe the components of natural immunity (10 marks)

QUESTION THREE (20 MARKS)

- a) Discuss the importance of mass vaccination and immunization in the community (10 marks)
b) Describe how immunotherapy works (10 marks)

QUESTION FOUR (20 MARKS)

- a) Discuss the cell mediated and humoral immunity (10 marks)
b) Identify and explain the functions of the organs of immune system (10 marks)

QUESTION FIVE (20 MARKS)

- a) Mr. Ndigo a public health officer noted that some unvaccinated children living in Kwao Estate were not suffering from measles infection despite not having been vaccinated. In reference to this statement discuss herd immunity (10 marks)
b) Describe the history of immunology (10 marks)