



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: 25/9/2019

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. Antigen
 - ii. Herd immunity
 - iii. Cytokines
- b) Differentiate between active immunity and passive immunity (3 marks)
- c) Outline factors which promote good immunity (3 marks)
- d) Briefly explain the main types of vaccines (3 marks)
- e) Explain the difference between immunocompromised and immunosuppressed (3 marks)
- f) Differentiate between Innate (natural) and Acquired (Adoptive) 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 how immunotherapy works (10 marks)

QUESTION THREE (20 MARKS)

- a) There is an outbreak of Measles in Nginyo village. Discuss the advantages of mass vaccination against measles in this village (10 marks)
- b) Describe the components of adoptive immunity (10 marks)

QUESTION FOUR (20 MARKS)

- a) Discuss humoral immunity (10 marks)
- b) Identify and explain the functions of the immune system organs (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 Measles infection despite not having been vaccinated. In reference to this statement discuss herd (10 marks)
- b) Describe the history of immunology (10 marks)