



MACHAKOS UNIVERSITY

University Examinations 2019/2020 Academic year

SCHOOL OF HEALTH SCIENCES

DEPARTMENT OF PUBLIC AND COMMUNITY HEALTH

SECOND YEAR SECOND SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE IN PUBLIC HEALTH.

HPH 209: IMMUNOLOGY

DATE: 1/12/2020

TIME: 2:00 – 4:00 PM

INSTRUCTIONS

This paper consists of two sections A and B

Section A

Specific instructions

- This section has one question
- This question is **COMPULSORY**
- The question is 30 marks

QUESTION ONE (30 MARKS)

- a) Define the following terms (3 marks)
- Immunology
 - Immunity
 - Immune system
- b) State the characteristics of reticuloendothelial cells (3 marks)
- c) Distinguish between T-dependent Antigen and T-independent Antigen (3 marks)
- d) Highlight and explain the branches of immunology (3 marks)
- e) Describe three characteristics of inflammation in injury (3 marks)
- f) Explain the functions of immunoglobulins (3 marks)
- g) Differentiate between hypersensitivity and autoimmune diseases (3 marks)

- h) Outline the chemical barriers of innate immunity (3 marks)
- i) Differentiate between immunosuppression and immunodeficiency (3 marks)
- j) State the functions of interleukin 1 (3 marks)

SECTION B:

Specific instructions

This section has four (4) questions

Answer any two (2) questions

Each question is 20 marks

QUESTION TWO (20 MARKS)

- a) Vaccines need to be handled with the greatest care and kept potent from the manufacturer to the consumers. In view of this, describe the types of vaccine, how they are transported and stored. (10 marks)
- b) Describe the characteristics of Innate immune system (10 marks)

QUESTION THREE (20 MARKS)

- a) Mr. Binamu started itching and developed hives all over the body after eating some fried beef and ugali at mama Safi food kiosk. In view of this, describe the four (4) types of hypersensitivity (10 marks)
- b) Explain the theories of immune response (10 marks)

QUESTION FOUR (20 MARKS)

- a) There is an outbreak of diphtheria in Nginyo village which has led to vaccination of 85% of the vulnerable population. Discuss the advantages of the mass vaccination in this village (10 marks)
- b) Describe in detail functions of the organs of the immune system (10 marks)

QUESTION FIVE (20 MARKS)

- a) Describe the major functions of lymphocytes (10 marks)

b) With the aid of a diagram illustrate and explain the phases of phagocytosis (10 marks)