



(University of Choice)

MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY

(MMUST)

MAIN CAMPUS

UNIVERSITY EXAMINATIONS

MAIN EXAM

2023/2024 ACADEMIC YEAR

SECOND YEAR FIRST SEMESTER EXAMINATION

FOR THE DEGREE OF BACHELOR OF SCIENCE IN ENVIRONMENTAL HEALTH

COURSE CODE: PHC 133

COURSE TITLE: FOUNDATION OF IMMUNOLOGY

DATE: 11.12.2023

TIME: 11.00-1.00 PM

INSTRUCTIONS TO CANDIDATES: ANSWER SECTION A ALL QUESTIONS AND SECTION B TWO QUESTIONS.

TIME: 2 Hours

MMUST observes ZERO tolerance to examination cheating

Paper Consists of 2 Printed Pages. Please Turn Over



SECTION A: SHORT ANSWER QUESTIONS (40 MARKS)

1. Define the following terminologies (4 Marks)
 - a) Neutralization
 - b) Autoimmunity
 - c) opsonization
 - d) complement activation
2. Highlight features of innate immunity (4 Marks)
3. State the role of compliment system (4 Marks)
4. Explain at least eight determinants of innate immunity (4 Marks)
5. State characteristics of adaptive immunity (4 Marks)
6. Outline at least four functional types of T cell (4 Marks)
7. Highlight the features of cytokines as a signaling molecules of inflammation (4 Marks)
8. State the differences between IGM and IGG (4 Marks)
9. Outline examples of antigen presenting cells (4 Marks)
10. List examples of autoimmune disorders (4 Marks)

SECTION B: LONG ANSWER QUESTIONS (30 MARKS)

11. Explain the key roles of Major Histocompatibility complex (MHC) in the field of public health (15 Marks)
12. Discuss the principles of immunization as key aspect of prevention of diseases (15 Marks)
13. The study of immunity and its application in environmental health is a broad field that encompasses many different aspects. Discuss in detail the study of immunity in relation to hypersensitivity (15 Marks)