



(University of Choice)

**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY
(MMUST)
(MAIN CAMPUS)**

**UNIVERSITY EXAMINATIONS
MAIN EXAM**

2021/2022 ACADEMIC YEAR

THIRD YEAR SECOND SEMESTER EXAMINATIONS

**FOR
DIPLOMA IN APPLIED BIOLOGY**

COURSE CODE: DSB 050

COURSE TITLE: IMMUNOLOGY AND HAEMATOLOGY

DATE: MONDAY, 25TH APRIL 2022

TIME: 3:00 – 5:00 P.M.

INSTRUCTIONS TO CANDIDATES

Answer **ALL** questions in section A and **ANY TWO** selected from section B

. TIME: 2 Hours

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 2 Printed Pages. Please Turn Over ►

DSB 050: IMMUNOLOGY AND HAEMATOLOGY

SECTION A (SHORT ANSWER QUESTION, 40 MARKS)

1. Outline five differences between innate and adaptive immunity. (5 marks)
2. Define the following terms;
 - a) Immunogenicity. (1 mark)
 - b) Haematopoiesis. (1 mark)
 - c) Epitope. (1 mark)
 - d) Immunoglobulin. (1 mark)
 - e) Hypersensitivity. (1 mark)
3. Briefly explain three mechanisms of graft rejection. (5 marks)
4. Outline five factors that influence immunogenicity. (5 marks)
5. Outline the unique features of adaptive immunity. (5 marks)
6. Describe the clonal selection hypothesis. (5 marks)
7. Describe the haemolytic disorder of a newborn. (5 marks)
8. Briefly explain the role of the skin as a part of the innate immune system. (5 marks)

SECTION B (ESSAY QUESTIONS, 30 MARKS)

9. Using a well labelled diagram describe the five classes of immunoglobulins and their functions. (15 marks)
10. Using a well-illustrated diagram, describe the process of haematopoiesis. (15 marks)
11. Describe the following techniques;
 - a. Sandwich ELISA. (5 marks)
 - b. Western blotting. (10 marks)