



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF PURE & APPLIED SCIENCES

UNIVERSITY EXAMINATION FOR:

DIPLOMA IN LABORATORY TECHNOLOGY

AAB 2207: BIOMEDICAL TECHNIQUES – IMMUNOLOGY

END OF SEMESTER EXAMINATION

SERIES: DEC 2024

TIME: 2HOURS

DATE: Pick Date Select Month Pick Year

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **FIVE** questions. Attempt question ONE (**Compulsory**) and any other **TWO** questions.

Do not write on the question paper.

SECTION A:

Question ONE

- a) Define the following terms as used in Immunology (7 marks)
 - i. **Allorecognition**
 - ii. **MHC**
 - iii. **Autoimmunity**
 - iv. **Transplantation**
 - v. **Autograft**
 - vi. **PRA**
 - vii. **Immune-competence**
- b) State the TWO types of MHC protein molecules (2 mks)
- c) State the TWO mechanisms that mediate active immunity (2 mks)
- d) Outline the natural barriers that prevent the entry of pathogens (4 mks)
- e) Outline the features of acquired immunity (6 mks)
- f) Outline the factors to consider when obtaining reagents for immunoassay screening (4mks)

- g) State FIVE compatibility items for consideration during transplantation (5 mks)

SECTION B:

Question TWO

- a) State THREE immunoassay critical success factors (3 mks)
- b) Discuss the Basic Steps for Developing and Running an Immunoassay (12 mks)

Question THREE

- a) State atleast THREE examples of autoimmune disorders (3 mks)
- b) Differentiate between humoral immunity and cell mediated immunity (12 mks)

Question FOUR

- a) Outline the similarities between B-Cell and T-cell (5 mks)
- b) Discuss the cells involved in innate immunity (10 mks)

Question FIVE

- a) State FIVE primary classes of immunoglobulin (5 mks)
- b) Discuss the types of transplantation involving tissues and organs (10 mks)