



Technical University of Mombasa

Faculty of Applied and Health Sciences

DEPARTMENT OF PURE AND APPLIED SCIENCES

UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF
TECHNOLOGY IN INDUSTRIAL MICROBIOLOGY AND BIOTECHNOLOGY
BTMBT12J

ABT 4209: IMMUNOCHEMISTRY I

SEMESTER EXAMINATION

DECEMBER 2013 SERIES

2 HOURS

Instructions to candidates:

This paper consist of **FIVE** questions

Answer question **ONE** (compulsory) and any other **TWO** questions

QUESTION ONE

a) Define the following terms :

- | | |
|-----------------------------------|-----------|
| (i) Haematopoiesis | (2 marks) |
| (ii) Avidity | (1 mark) |
| (iii) Regenerating primary organs | (1 mark) |
| (iv) Chemotaxis | (2 marks) |

b) Elaborate on the following cells :

- | | |
|-----------------|-----------|
| (i) Eosinophils | (3 marks) |
| (ii) Basophilis | (3 marks) |

c) Describe the following terms :

- | | |
|-----------------------------|-----------|
| (i) Primary lymphoid organs | (2 marks) |
|-----------------------------|-----------|

- (ii) Immunoglobulin E (3 marks)
- (iii) Heterophiles Antigen (1 mark)
- (iv) Primary response (2 marks)

- d) Differentiate between T cells and B cells (4 marks)
- e) Explain the following terms
 - (i) MHC class II protein (3 marks)
 - (ii) Negative selection (3 marks)

QUESTION TWO

Discuss lymphoid organs with reference to:-

- (i) MALT (Mucoal Associated Lymphoid tissue) (5 marks)
- (ii) Lymph nodes (5 marks)
- (iii) Spleen (5 marks)
- (iv) Thymus (5 marks)

QUESTION THREE

With reference to cells of immune system, elaborate on:-

- (i) CD8 T-lymphocytes (5 marks)
- (ii) B cells (5 marks)
- (iii) Natural killer cells (5 marks)
- (iv) Neutrophil cells (5 marks)

QUESTION FOUR

Elaborate on immune recognition, with reference to:

- (i) Antigen recognition by B lymphocytes (10 marks)
- (ii) Antigen recognition by T lymphocytes (10 marks)

QUESTION FIVE

Discuss type I hypersensitivity (20 marks)