

UNIVERSITY EXAMINATIONS

FIRST SEMESTER 2025/2026 ACADEMIC YEAR

**FOURTH YEAR EXAMINATION FOR THE DEGREE OF
BACHELOR OF BIOMEDICAL SCIENCE AND
TECHNOLOGY**

BMED 411: PRINCIPLES OF IMMUNOLOGY

STREAM: R

TIME: 2 HRS

DAY: THURSDAY [2.30 – 4.30 P.M]

DATE: 05/02/2026

THIS QUESTION PAPER CONSISTS OF TWO (2) PAGES

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SECTION A: ANSWER ALL QUESTIONS (40 MARKS)

QUESTION ONE

Distinguish between immunity and immunoglobulins (6 Marks)

QUESTION TWO

Explain the effectors' role of sensitized T – cells in cell mediated immunity (6 Marks)

QUESTION THREE

Outline the characteristics of the primary lymphoid organs (6 Marks)

QUESTION FOUR

Explain any two diseases/conditions manifested by Type 1 hypersensitivity (6 Marks)

QUESTION FIVE

Citing examples, explain the main routes of vaccine administration (6 Marks)

QUESTION SIX

Demonstrate the immune reactions that are manifested by IgE antibodies (6 Marks)

QUESTION SEVEN

Explain the importance of the Complement System (4 Marks)

SECTION B (30 MARKS): ANSWER ANY TWO QUESTIONS

QUESTION EIGHT

Discuss the formation of the Membrane Attack Complex (MAC) by the Complement System (15 Marks)

QUESTION NINE

Illustrate the structures and describe functions of the human lymph nodes and the mucosal associated lymphoid tissue (MALT) (15 Marks)

QUESTION TEN

Discuss the events that take place during inflammation (15 Marks)