W1-2-60-1-6

JOMO KENYATTA UNIVERSITY
OF
AGRICULTURE AND TECHNOLOGY
University Examinations 2025/2026

FIRST YEAR SPECIAL/SUPPLIMENTARY EXAMINATION FOR THE DEGREE OF MASTER OF SCIENCE IN MOLECULAR MEDICINE

TIM 3102: IMMUNITY AND DISEASE

DATE: JUNE 2026 **TIME: 3 HOURS**

INSTRUCTIONS: ANSWER ANY FOUR QUESTIONS ONLY

Question One

Discuss the secondary lymphoid organs and their role in immunity (25marks)

Question Two

i. Discuss the Gell and Coombs classification of hypersensitivity reactions (15marks)
ii. To what extent is this model still relevant in modern immunology (10marks)

Question Three

i. Discuss vaccine stability and why it is important in global immunization programs (15marks)
ii. Describe the mechanisms by which IgA protects mucosal surfaces (10marks)

Question four

Discuss immunological evasion and resistance to bacterial infections (25marks)

Question five

1. (i) Describe the mannose binding lectin pathway of the complement system (13 marks)
   (ii) Discuss the key major functions of the complement system (12marks)

Question six

Discuss immunity to fungal infections and how fungi escape the immune system (25marks)