



**KENYATTA UNIVERSITY**  
**UNIVERSITY EXAMINATIONS 2017/2018**  
**CITY CAMPUS**

**FIRST SEMESTER EXAMINATION FOR THE DEGREE OF MASTER OF SCIENCE**  
**(MICROBIOLOGY)**

**SMB 807: IMMUNOLOGY AND SEROLOGY**

**DATE: FRIDAY 9<sup>TH</sup> FEBRUARY 2018**

**TIME: 5.30 P.M. - 8.30 P.M.**

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**INSTRUCTIONS:**

**Answer ANY FOUR out of the Five questions listed below (each 25 marks)**

1. Write an essay on innate and adaptive immunity.
2. Describe the complement system pathways and their effects on host resistance to infection.
3. Describe type one and type four hypersensitivity reactions.
4. Discuss ELISpot and lymphocyte proliferation assays and their application in immune response.
5. Write essay on vaccine designs, challenges and way forward.

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