



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY  
SCHOOL OF HEALTH SCIENCES  
UNIVERSITY EXAMINATION FOR DEGREE OF MASTER  
3<sup>RD</sup> YEAR 2<sup>ND</sup> SEMESTER 2018/2019 ACADEMIC YEAR  
KISUMU**

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**COURSE CODE: HCD 3325**

**COURSE TITLE: BASIC IMMUNOLOGY**

**EXAM VENUE:                      STREAM: BSc. Community Health & Development**

**DATE: --                              EXAM SESSION: --**

**TIME: 2.00 HOURS**

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**Instructions:**

- 1. Answer ALL Questions in section A and ANY other TWO in section B**
- 2. Candidates are advised not to write on the question paper.**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room.**

**Section A: Answer ALL Questions (Total 30 marks)**

1. Briefly describe three negative effects of human immune responses (3 marks)
2. a) Differentiate between vaccination and immunization (1 marks)  
b) Explain the principle of vaccination (2 marks)
3. Highlight three differences between innate and adaptive immunity (3 marks)
4. Briefly describe how the body continually acquire antibodies over life time for defense against pathogens (3 marks)
5. a) Explain the principle of Rapid Diagnostic Test (RDT) for disease diagnosis (2 marks)  
b) Give one limitation of RDTs use for disease diagnosis (1 mark)
6. Formulate three policies on disease control, prevention and management basing your argument on immunology discipline (3 marks)
7. List three possible sources of false results in Rapid Diagnostic Test (RDT) use for disease diagnosis (3 marks)
8. As a health officer incharge, you are tasked to offer an explanation as to why individuals living in a given area, endemic for malaria infections are often able to fight off repeated malaria infection (3 marks)
9. a) Explain the concept of allergic reaction (1 mark)  
b) Explain why most people develop allergic reaction from protein food sources (2 marks)
10. State three reasons why development of malaria vaccine has posed great challenge to achieve (3 marks)

**Section B: Answer ANY TWO Questions (Total 40 marks)**

1. Describe anatomical barriers and innate mechanisms of host defense (20 marks)
2. a) Briefly describe five ways through which pathogens are able to evade host immune response (5 marks)  
b) Discuss the factors that influence immunogenicity (15 marks)
3. a) Briefly describe three general characteristics of antibody responses ( 3 marks)  
b) Differentiate between primary and secondary immune responses (2 marks)  
c) With the aid of well labeled diagrams, describe kinetics of both primary and secondary antibody responses to T-dependent antigen (15 marks)
4. a) Briefly describe the three general functions of immunoglobulin (3 marks)  
b) Discuss the structures and properties of various classes of immunoglobulins (17 marks)