



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF HEALTH SCIENCES
UNIVERSITY EXAMINATION FOR DEGREE OF MASTER
3RD YEAR 2ND SEMESTER 2019/2020 ACADEMIC YEAR
KLC

COURSE CODE: HCD 3325

COURSE TITLE: BASIC IMMUNOLOGY

DATE: 13/08/2019

EXAM SESSION: 9.00 – 11.00 AM

TIME: 2.00 HOURS

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. Define herd immunity and give its importance (3 marks)
2. Differentiate between:
 - a) Antigen and antibody
 - b) Immunological tolerance and hypersensitivity
 - c) Hapten and epitope (3 marks)
3. Write short notes on immunotherapy as a method of cancer treatment (3 marks)
4. Formulate three policies on disease control, prevention and management basing your argument on immunology discipline (3 marks)
5. Individuals living in a given area, endemic for a certain parasitic infection are often able to fight off repeated infection. Explain (3 marks)
6. Recent pathogenic infections may give false negative results when using Rapid Diagnostic Test as diagnostic tool. Explain (3 marks)
7. Highlight three differences between innate and adaptive immunity (3 marks)
8. Briefly describe how the body continually acquire antibodies over life time for defense against pathogens (3 marks)
9. State three general functions of immunoglobulin (3 marks)
10. Explain the principle of tissue/organ transplant rejection (3 marks)

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

1. Discuss importance and shortcomings of host immune responses (20 marks)
2. Discuss mechanisms employed by pathogens to escape recognition and destruction by host immune responses (20 marks)
3.
 - a) Describe the properties of cytokines (10 marks)
 - b) Discuss the factors that influence immunogenicity (10 marks)
4.
 - 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 in detail the kinetics of both primary and secondary antibody responses to T-dependent antigen (15 marks)