



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF HEALTH SCIENCES
UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN
COMMUNITY HEALTH AND DEVELOPMENT & BACHELOR OF SCIENCE IN
PUBLIC HEALTH
3RD YEAR 2ND SEMESTER 2018/2019
KISII L. C.

COURSE CODE: HCD 3325

COURSE TITLE: BASIC IMMUNOLOGY

STREAM: BSc. Comm Hlth & Dvlnt and BSc. P.H

TIME: 2HRS

Instructions

- 1. Answer all questions in section A (compulsory) and any other 2 questions 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 (30 MARKS)

1. Which of the following is not a phagocytic cell
 - (a) Alveolar macrophages
 - (b) Splenic macrophages
 - (c) Brain microglia
 - (d) Interferon
2. Which one is not a characteristic of adaptive immunity?
 - (a) Antigen specificity
 - (b) Immunologic memory
 - (c) Inflammatory response
 - (d) self/non self-recognition
3. Which is not the function of lymph nodes
 - (a) Production of antibodies by the plasma cells
 - (b) Provides site for phagocytosis
 - (c) Induction of tolerance against harmless antigens
 - (d) Regulating mucosal immunity
4. State 3 main functions of T helper cells (3mks)
5. Explain functions of neutrophils (4mks)
6. State three symptoms characterizing inflammation (4mks)
7. State four functions of natural killer cells (4mks)
8. State four cells involved in phagocytosis (4mks)
9. State four functions of the spleen (4mks)
10. State the lymphoid organs (4mks)

SECTION B (40 marks)

1. a) State the fundamental differences between humoral and cell mediated immune responses (10mks)
 - b) Explain 5 factors that enhance immunogenicity (10mks)
2. Discuss four types of vaccine design (formulations) and give an example in each category (20mks)
3. a) Discuss the innate immune system (10mks)
 - b) Explain phagocytosis process (10mks)
4. a) Draw the hematopoietic stem cell from which all cells originate (10mks)
 - b) State the major functions of each of the immunologic cells in the lymphoid and myeloid lineage (10mks)