



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY  
SCHOOL OF HEALTH SCIENCES**

**UNIVERSITY EXAMINATION FOR DEGREE OF MASTER**

**2<sup>ND</sup> YEAR 1<sup>ST</sup> SEMESTER 2023/2024 ACADEMIC YEAR**

**MAIN/KISUMU**

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**COURSE CODE: HCB 1201**

**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. a. Differentiate specific from non-specific immune responses (4 mks)  
b. Briefly describe the various units that make the *immune system*, citing examples (6 mks)
2. Briefly describe any two common challenges in studying *immunology* (4 mks)
3. Explain the main difference between *passive* and *active* immunity (4 mks)
4. Briefly explain the basis of *immunoglobulin* classification, naming the human antibodies(6 mks)
5. Describe briefly the three key functions of the *complement activation* (6 mks)

**Section B: Answer ANY TWO Questions**

1. Discuss any 5 characteristics of a substance that determine its immunogenicity (20 mks)
2. Discuss any 5 qualities of cytokines, explaining how these affect their role in immunity (20 mks)
3. With the help of a well-labeled diagram, show how IgG and IgM levels vary between primary and secondary encounter with the same antigen (20 mks)
4. Discuss immunodeficiency as a *failure of the immune system* (20 mks)