



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND
TECHNOLOGY**

SCHOOL OF HEALTH SCIENCES

**UNIVERSITY EXAMINATION FOR DEGREE OF BACHELOR OF SCIENCE IN COMMUNITY
HEALTH AND DEVELOPMENT/BACHELOR OF SCIENCE IN PUBLIC HEALTH
3RD YEAR 2ND SEMESTER 2023/2024 ACADEMIC YEAR**

Main Campus

COURSE CODE: HBB 9302

COURSE TITLE: BASIC IMMUNOLOGY

EXAM VENUE: STREAM: BSc. Community Health

DATE: EXAM SESSION:

TIME: 2.00 HOURS

Instructions:

- 1. Answer ALL Questions in Section A and any TWO 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: Answer ALL Questions (Total 30 marks)

1. Define the term *antigen* as used in immunology (2 mks)
2. Briefly explain THREE underlying differences between innate and adaptive immune responses (6 mks)
3. Explain the main role of cells in immune responses (4 mks)
4. Describe how human antibodies differ in structure (10 mks)
5. Name any FOUR vaccines administered during childhood, and state the targeted disease (8 mks)

Section B: Answer ANY TWO Questions

1. Describe phagocytosis as a mechanism of immune protection (20 mks)
2. Describe any FIVE determinants of antigenicity of a substance (20 mks)
3. Discuss any FIVE properties of cytokines, explaining how these affect their role in immunity (20 mks)
4. Discuss hypersensitivity as one of the failures of the immune system (20 mks)