



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

**SCHOOL OF HEALTH SCIENCES**

**UNIVERSITY EXAMINATION FOR THE CERTIFICATE IN COMMUNITY  
HEALTH AND DEVELOPMENT**

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

**MAIN/KISUMU CAMPUS**

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**COURSE CODE:** HCD 1121

**COURSE TITLE:** BASIC MICTOBIOLOGY

**EXAM VENUE:** STREAM: Cert. Comm. Health & Dev

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

**TIME: 1.30 HOURS**

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**Instructions:**

- 1. Answer all the questions in Section A and 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- ANSWER ALL QUESTIONS (30 MARKS)**

1. Distinguish the following
  - a. light and electron microscope (4marks)
  - b. Prokaryotes and Eukaryotes (4marks)
  - c. Liquid and semi-solid culture media (4marks)
  
2. Enumerate any 3 macronutrients used by microbial cells for growth (3 marks)
3. Highlight any 3 microbial diversity that exist in microorganisms (3 marks)
4. Outline **three** major groups of fungi (3 marks)
5. State and explain 2 organisms that are affected by oxygen (3 marks)
6. State with examples the morphological classification of bacteria (6 marks)

**SECTION B- ANSWER ANY TWO QUESTIONS FROM THIS SECTION (30 MARKS)**

7. Discuss the characteristics of a microbial cell (15 marks)
8. With a clear illustration, highlight the functions of a microscope (15 marks)
9. Discuss any five ways in which microorganisms may be useful to man (15 marks)