



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**SCHOOL OF HEALTH SCIENCES**  
**UNIVERSITY EXAMINATION FOR DEGREE OF BACHELOR OF SCIENCE**  
**PUBLIC & COMMUNITY HEALTH AND DEVELOPMENT**  
**2<sup>ND</sup> YEAR 1<sup>ST</sup> SEMESTER 2023/2024 ACADEMIC YEAR**  
**KISUMU CAMPUS**

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**COURSE CODE: HBB 9201**

**COURSE TITLE: BASIC MICROBIOLOGY**

**EXAM VENUE: STREAM: (BSc. Com Health and Dev)**

**DATE: EXAM SESSION:**

**TIME: 2.00 HOURS**

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**Instructions:**

- 1. Answer all the questions in Section A each contain 3 marks and ANY other two questions in Section B each contain 20 marks.**
- 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**

1. Distinguish Prokaryotes and Eukaryotes (3 marks)
2. Name with examples 3 groups of antimicrobial agents in common use (3 marks)
3. Enumerate any 3 macronutrients used by microbial cells for growth (3 marks)
4. Identify any 3 organelles found in prokaryotic cells (3marks)
5. State and explain any 2 conditions favouring the survival of microorganisms (3marks)
6. State with examples the morphological classification of bacteria (3 marks)
7. Differentiate between antibiotics and Growth factor analogue (3 marks)
8. State and explain 6 organisms that are affected by temperature (3 marks)
9. Outline effects produced by antimicrobial agents (3 marks)
10. Highlight the ecological relationships that exist in microorganisms (3 marks)

### **SECTION B**

1. Describe the growth cycle of microbial populations (20 marks)
2. Discuss any **FIVE** ways bacteria can be classified (20marks)
3. Describe **FOUR** common sterilization methods used in community or facility settings (20marks)
4. Giving relevant examples, discuss **FOUR** economic importance of fungi (20 marks)