

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

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

1st YEAR 2nd SEMESTER 2015/2016 ACADEMIC YEAR

KISII CAMPUS

COURSE CODE: HCD1121

COURSE TITLE: BASIC MICROBIOLOGY

EXAM VENUE: STREAM: (Cert. Comm Hlth & Dev)

DATE: EXAM SESSION:

TIME: 1.5 HOURS

Instructions:

- 1. Answer all questions in section A 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 ANSWER ALL QUESTIONS IN THIS SECTION (30 MARKS)

1. List any three factors necessary for growth of microorganisms. (3mks)
2. Explain the role of fixation in smear preparation (3mks)
3. Differentiate between simple staining and differential staining. (3mks)
4. List any three components of a culture medium (3mks)
5. List three differences between eukaryotes and prokaryotes (3mks)
6. List three methods of measuring bacterial growth (3mks)
7. Illustrate three streaking methods of inoculation (3mks)
8. Classify bacteria on basis of oxygen requirements (3mks)
9. Briefly describe “diauxic growth” (3mks)
10. List three factors that affect sterilization by heat (3mks)

SECTION B. ANSWER ANY TWO

11. Discuss the application of temperature in sterilization (15mks)
12. Explain the economic importance of microorganisms (15mks)
13. Outline the steps involved in the replication cycle of a virus. (15mks)
14. (a). discuss the importance of staining in study of microorganisms (5mks)
(b). outline the role of microscopy in microbiology. (10mks)