



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND
TECHNOLOGY

UNIVERSITY EXAMINATIONS 2012/2013

1ST YEAR 2ND SEMESTER EXAMINATIONS FOR THE DEGREE
OF BACHELOR OF SCIENCE IN COMMUNITY HEALTH AND
DEVELOPMENT

(BUSIA LEARNING CENTRE)

COURSE CODE: HCD 2121

COURSE TITLE: INTRODUCTION TO BASIC MICROBIOLOGY.

DATE: 16/4/2013

TIME: 9.00-10.30AM

DURATION: 1.5 HOURS

INSTRUCTIONS

1. This paper contains two sections.
2. Answer all questions in section A and ANY other 2 in section B.
3. Answer all questions in the booklet provided.

Section A. Answer all questions 30 marks

1. List three beneficial and three harmful effects caused by bacteria to man (**3 marks**)
2. Describe three chemical tests that are used to differentiate Bacteria from other prokaryotic organisms. (**3 marks**)
3. Define the three main groups into which the domain Archeaea is divided based on their ecological niches. (**3 marks**)
4. Name four phases that are used to measure microbial growth (**3 marks**)
5. Name the three lenses that are found in a compound light microscope and their basic functions (**3 marks**)
6. In microscopy state at least one function of the following processes (a) **staining** (b) **fixing of a microorganism** (**3 marks**).
7. Define any three methods that are used to control microorganisms in a given environment (**3 marks**).
8. List three beneficial and three harmful effects of Fungi to man (**3 marks**).
9. Name three characteristics that are used to classify viruses into families (**3 marks**)
10. Define **Bacteriophages**. Describe the morphological structure of a bacteriophage. (**3 marks**)

Section B. Answer any two question 30 marks.

1. Using bacteria as an example draw a sketch of a typical prokaryotic cell showing the basic structures and their functions. (**15 marks**)
2. With examples describe three ways in which total microbial growth can be measured. (**15 marks**)
- 3- Describe the ecological importance of fungi and Algae in nature. (**15 marks**)
- 4- List three common viral diseases that infect man. Describe their mode of transmission and treatment. (**15 marks**)