



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

UNIVERSITY EXAMINATIONS 2012/2013

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

(KISUMU LEARNING CENTRE)

COURSE CODE: SBI 3211

COURSE TITLE: BASIC MICROBIOLOGY

DATE: 21/4/2013

TIME: 11.00-13.00PM

DURATION : 2 HOURS

INSTRUCTIONS

1. This paper contains TWO sections.
2. Answer ALL questions in section A (Compulsory) and ANY other Two questions in section B.
3. Write all answers in the booklet provided.

Section A: Answer ALL Questions (Total 30 marks)

1. Explain the fundamental differences between *prokaryotes* and *eukaryotes* (3 mks)
2. List any six fungal toxins, citing the key pathologies associated with them (3 mks)
3. Briefly describe the *clostridia*, citing any 3 bacteria and any 3 respective infections (3 mks)
4. Describe the pathogenesis of *rheumatic fever* in humans (3 mks)
5. Briefly explain any two virulence factors associated with *Neisseria gonorrhoeae* (3 mks)
6. With two examples, define the term *dermatophyte* (3 mks)
7. Name any three microbial agents of meningitis (3 mks)
8. Name with examples any three groups of anti-microbial agents in common use (3 mks)
9. List any six enteric bacteria of medical importance (3 mks)
10. List any three toxins and three enzymes that aid bacterial virulence (3 mks)

Section B: Answer any TWO Questions (Total 40 marks)

1. Discuss the structure of a typical prokaryotic cell using a well labeled diagram (20 mks)
2. Using any three examples, describe the role of enzymes microbial virulence (20 mks)
3. Briefly describe microbial nutritional and growth requirements (20 mks)
4. Discuss the various areas microorganisms are applied positively by humans (20 mks)