JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
UNIVERSITY EXAMINATIONS 2012/2013
2ND YEAR 1ST SEMESTER EXAMINATIONS FOR THE DEGREE OF BACHELOR OF BSC. PUBLIC HEALTH AND BSC COMMUNITY HEALTH DEVELOPMENT
(KISII LEARNING CENTRE)

COURSE CODE: SBI 3211
COURSE TITLE: INTRODUCTION TO BASIC MICROBIOLOGY

DATE: /4/2013 TIME: 9.00-11.00AM
DURATION: 1.5 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

Q1. a). In reference to the Germ Theory of Disease discuss Koch's postulates. 8mks

b). List any five beneficial activities of micro-organisms. 5mks

c). Briefly discuss how microbial control agents kill microorganisms (action). 9mks

d). Assuming that you are a public health officer in charge. A company introduces you to

Q2. a). State with an example the mode of action of the following antibiotics 10mks

i. Cephalosporins

ii. Aminoglycosides

iii. Quinolones and fluoroquinolones

iv. Sulfonamides (Sulfa drugs)

v. Azoles

b) With a well labeled graph, describe the Lytic Phage Multiplication Cycle with specific emphasis on total phage and extracellular phage.10mks.

Q3. a) Outline the process of isolation of pure colonies by using the streak plate technique by aseptic technique. 10mks

c) Can an isolated colony be considered pure? Explain. 5mks

d) Why is the study of microbiology important? 5mks

Q4. List Ten Core Functions of the public health microbiology laboratory system. 20mks

Q5 a) State with at least one example five mechanisms through which bacteria develop resistance to anti-microbial drugs. 10mks

b) Outline five Dangers of indiscriminate use of antimicrobial drugs 10mks