



EMBU UNIVERSITY COLLEGE

(A CONSTITUENT COLLEGE OF THE UNIVERSITY OF NAIROBI)

FIRST SEMESTER EXAMINATION 2013/2014

**FIRST YEAR EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN
HORTICULTURE/ AGRICULTURAL EDUCATION AND EXTENSION/
AGRICULTURE/RANGE MANAGEMENT**

ACP 101: MICROBIOLOGY

DATE: DECEMBER 9, 2013

TIME: 8.30 – 10.30AM

INSTRUCTIONS:

Answer Question ONE and ANY Other TWO Questions.

QUESTION ONE

- a) Explain Koch's postulates (4mks)
- b) Differentiate between differential medium and selective medium (2mks)
- c) Describe using illustrations the three methods of inoculating microorganisms on a solid medium (6mks)
- d) State five methods of preserving cultures (5mks)
- e) State five characteristics used in differentiating colonies Size (5mks)
- f) Differentiate between catabolism and anabolism in microbes (4mks)
- g) Explain the meaning of the following terms as used in microbiology (4mks)
 - i. Generation time

- ii. Thermophiles
- iii. Strict anaerobes
- iv. Autotrophs

QUESTION TWO

Describe briefly five factors that affect disinfection of microorganisms (20mks)

QUESTION THREE

Discuss five roles of microorganisms in the carbon cycle (20mks)

QUESTION FOUR

Describe and illustrate the phases of microbial growth (20mks)

QUESTION FIVE

Discuss the role of microorganisms in digestion (20mks)

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