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# KIBABII UNIVERSITY

## UNIVERSITY EXAMINATIONS 2015/2016 ACADEMIC YEAR FIRST YEAR SECOND SEMESTER MAIN EXAMINATION

FOR THE DEGREE OF BACHELOR OF SCIENCE

**COURSE CODE:** SBT 122

**COURSE TITLE:** GENERAL MICROBIOLOGY

**DATE:** 11<sup>th</sup> May 2016

**TIME:** 9:00 – 11:00 a.m.

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### INSTRUCTIONS TO CANDIDATES

Answer Question one (1) and any other two (2) Questions. Question one is compulsory and carries 30 marks, the other Questions carry 20 marks each.

TIME: 2 Hours

This paper consists of 2 printed pages. Please Turn Over



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**Question One (30 Marks)**

- (a) Explain the contribution made by the following scientists to the current Microbiology.
- (i) Antony Van Leeuwenhoek (2.5) Marks)
  - (ii) Robert Koch (2.5Marks)
- (b) Describe three main shapes or forms of bacteria (5 Marks)
- (c) Explain the routes of transmission and entry of microorganisms into the host (5 Marks)
- (d) Explain the procedure for Gram stain (5Marks)
- (e) Describe the main types of Viruses (5Marks)
- (f) Discuss the physical and chemical control of microorganisms (5Marks).

**Question Two (20 Marks)**

- (a) Describe the nutritional classification of bacteria basing on: energy source, carbon source and both (10 Marks)
- (b) With the aid of a labeled diagram describe the arrangement of bacterial flagella (10 marks)

**Question Three (20 Marks)**

With the aid a labeled diagram, explain a typical bacterial growth curve (20 Marks)

**Question four (20 Marks)**

Explain 4 stages of virus multiplication/ reproduction (20 Marks)

**Question Five (20 Marks)**

Explain the collection and handling of infectious laboratory specimen (20 Marks)