



MACHAKOS UNIVERSITY COLLEGE

(A Constituent College of Kenyatta University)
University Examinations for 2015/2016 Academic Year

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

**FIRST SEMESTER EXAMINATION FOR THE DEGREE OF
BACHELOR OF SCIENCE IN BIOLOGY
BACHELOR OF EDUCATION (SCIENCE)**

SBT 202/SMB 200: GENERAL MICROBIOLOGY

DATE: 4/8/2016

TIME: 11.00-1.00 PM

INSTRUCTIONS

Answer ALL questions in Section A and any TWO questions in Section B. Answers to questions in Section A should be concise.

SECTION A

1. a) State **ONE** contribution of the following persons in the evolution of Microbiology (5 marks)
 - i) Joseph lister
 - ii) Martinus Beijerinck.
 - iii) Francesco Redi
 - iv) Robert Hook.
 - v) Ferdinand Cohn

- b) Highlight the general characteristics of a typical virion (virus particle). (5 marks)
- c) Describe the major differences between prokaryotic and eukaryotic cells. (5 marks)
- d) Using specific examples, explain the major bacterial morphologies (5 marks)
- e) Using specific examples, briefly outline the economic importance of Fungi (5 marks)
- f) Explain the limitations of Koch's postulates in demonstrating a pathogen as the cause of disease. (5 marks)

SECTION B: ANSWER ANY TWO QUESTIONS IN THIS SECTION.

2. Discuss the various methods of sterilisation. (20 marks)
3. Discuss the factors necessary for microbial growth. (20 marks)
4. Describe the extra-cellular structures of a typical bacterial cell. (20 marks)
5. Discuss the different types of culture media used in bacteriology. (20 marks)