



# MAASAI MARA UNIVERSITY

REGULAR UNIVERSITY EXAMINATIONS

2018/2019 ACADEMIC YEAR

THIRD YEAR SECOND SEMESTER EXAMINATION  
FOR  
THE DEGREE OF BACHELOR OF SCIENCE AND BACHELOR OF EDUCATION  
(SCIENCE)

COURSE CODE: BOT 312

COURSE TITLE: MICROBIOLOGY 1

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DATE: 4<sup>TH</sup> DECEMBER 2018

TIME: 1100 – 1300 HRS

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## Instructions

Answer question **one (compulsory)** and any other **two** questions

Illustrate your answers with diagrams and give examples where appropriate.

**SECTION A: ANSWER ALL QUESTIONS (30 MARKS)**

1. Identify the importance of Koch's postulates. **(3 marks)**
2. Explain the Importance of observations made by Louis Pasteur. **(3 marks)**
3. Describe the lytic cycle of T-even bacteriophages. **(3 marks)**
4. Briefly explain how Gram reaction is useful in prescribing antibiotic treatment. **(3 marks)**
5. Explain the purpose of simple staining. **(3 marks)**
6. Discuss the advantages of the three-domain system. **(3 marks)**
7. Explain the importance of media for culturing microbes in the laboratory. **(3 marks)**
8. Describe the structure of the two types of endoplasmic reticulum and their functions. **(3 marks)**
9. Discuss the main features of fungal classification and representative examples of each group. **(3 marks)**
10. Describe the goals of nomenclature and how the binomial system is structured. **(3 marks)**

**SECTION B: ANSWER ANY OTHER TWO QUESTIONS (40 MARKS)**

11. Explain the important contributions microorganisms make in the earth's ecosystems. **(20 marks)**
12. Discuss culture media preparation. **(20 marks)**
13. Discuss chemical and physical factors effective in the control of microorganisms. **(20 marks)**
14. Describe three basic techniques for isolation, including tools, media, incubation, and outcome. **(20 marks)**

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