



# **MAASAI MARA UNIVERSITY**

**REGULAR UNIVERSITY EXAMINATIONS**

**2022/2023 ACADEMIC YEAR**

**SECOND YEAR FIRST SEMESTER**

**SCHOOL OF NATURAL RESOURCES, TOURISM AND  
HOSPITALITY**

**BACHELOR OF SCIENCE IN ANIMAL HEALTH AND  
PRODUCTION**

**COURSE CODE: AHP 2103-1**

**COURSE TITLE: BACTERIOLOGY, RICKETTSIA AND  
MYCOPLASMA**

**DATE: 2<sup>ND</sup> DECEMBER, 2022**

**TIME: 1100-1300**

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**INSTRUCTIONS TO CANDIDATES**

Answer **ALL** questions

**This paper consists of two (2) printed pages. Please turn over**

### Question 1

- a) Define the following terms used in microbiology while highlighting example where applicable **(10 marks)**
- i. Aerobe
  - ii. Facultative anaerobes
  - iii. Lophotrichous
  - iv. Pathogen
  - v. Septicemia
- b) Discuss the reasons for studying microbiology in Animal Health **(10 marks)**

### Question 2

- a) Mention the four (4) Koch-Henle's Postulates in microbiology **(4 marks)**
- b) Discuss two (2) methods available for better containment of microbes in the laboratory **(8 marks)**
- c) State factors to consider in the sub-division of biosafety level four laboratories while highlighting their advantages **(8 marks)**

### Question 3

- a) Using a well labelled diagram, discuss the cell structure of prokaryotes **(10 marks)**
- b) What is bacterial growth curve? **(10 marks)**

### Question 4

Discuss the factors that affect growth of bacteria **(20 marks)**

### Question 5

- a) Discuss the mechanism of pathogenicity under the following sub-headings **(10marks)**
- i. Portal of entry
  - ii. Number of invading micro-organisms
  - iii. Penetration or invasion of host defence system
  - iv. Damage to host cells
  - v. Portal of exit
- b) Write notes on antimicrobial resistance **(10 marks)**

### Question 6

- a) Give any (Five) 5 species of *Chlaymdia* organism in bacteriology (5 marks)
- b) Describe four (4) methods of diseases prevention and control in livestock (4marks)
- c) State any five (5) types of rickettsia organism while highlighting their microscopic identification features (11 marks)

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