



MAASAI MARA UNIVERSITY

REGULAR UNIVERSITY EXAMINATIONS

2023/2024 ACADEMIC YEAR

FIRST 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: BACTERIA, RICKETTSIA &
MYCOPLASMA**

DATE: 14/12/2023

TIME: 0830-1030 HRS

INSTRUCTIONS TO CANDIDATES

Answer ALL questions

This paper consists of 3 printed pages. Please turn over

Answer all questions

BACTERIA, RICKETTSIA & MYCOPLASMA [120 Marks]

- 1**
 - a. Define the following terms
 - I. Sterilization (1 mk)**
 - II. Disinfection(1 mk)**
 - III. Sepsis (1 mk)**
 - IV. Facultative anaerobes (1 mk)**
 - V. Virulence (1 mk)**
 - VI. Pathogenicity (1 mk)**
 - VII. Attenuation (1 mk)**
 - VIII. Immunization (1 mk)**
 - b. State and explain the routes of entry of disease causing organisms. Give an example of organism for each route.**(12 mks)**

- 2** Describe biosafety under the following sub-headings:
 - I. Primary containment of microbes (3 mks)**
 - II. Secondary containment of microbes (3 mks)**
 - III. Maximum containment laboratory (7 mks)**
 - IV. State seven best microbiological practices in a laboratory (7 mks)**

- 3**
 - I. Describe bacterial growth phases withaid of a well labelled curve (12 mks)**
 - II. State and explain four factors affecting bacterial growth (8 mks)**

- 4**
 - I. State causative agents of the following rickettsial diseases of veterinary importance.**
 - a) Bovine Anaplasmosis (2 mks)**
 - b) Q-fever (1 mk)**
 - c) Heart water (1 mk)**
 - d) Bovine petechial fever (1 mk)**
 - II. State the different methods of diagnosis of rickettsial diseases (5 mks)**
 - III. State six clinical signs of heartwater (6 mks)**
 - IV. State four control and prevention measures of rickettsial diseases (4 mks)**

- 5 Describe *Leptospira* under the following;
- I. State two species of pathogenic importance in animals **(2 mks)**
 - II. State and briefly explain the six methods of transmission of *Leptospira* in animals **(12 mks)**
 - III. State any three clinical signs of leptospirosis in animals **(3 mks)**
 - IV. State three samples for laboratory diagnosis of *Leptospira* **(3 mks)**
- 6.
- I. State the four Koch-Henle's postulates **(4 mks)**
 - II. Explain the principles of the following biochemical tests used in bacteriology and state one positive species of bacteria
 - a) Catalase test **(4 mks)**
 - b) Oxidase test **(4 mks)**
 - c) Coagulase test **(4 mks)**
 - d) indole test **(4 mks)**

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