



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 with aid 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)**

/END/