



MAASAI MARA UNIVERSITY

REGULAR UNIVERSITY EXAMINATIONS

2023/2024 ACADEMIC YEAR

SECOND YEAR FIRST SEMESTER

**SCHOOL OF PURE, APPLIED AND HEALTH
SCIENCES**

BACHELOR OF SCIENCE IN MICROBIOLOGY

COURSE TITLE: MIC 2103-1

COURSE CODE: BACTERIOLOGY

DATE: 05/12/23

TIME:1100-1300HRS

Instructions

A. Answer ANY TEN (10) questions.

B. Illustrate your answers with diagrams and give examples where appropriate.

ANSWER ANY TEN QUESTIONS (50 MARKS)

1.
 - a. State the four Koch's postulates. **(4 marks)**
 - b. Define the following terminologies as used in microbiology
 - i. Purulent infection **(1/2 mark)**
 - ii. Virulence **(1/2 mark)**
2. Compare and contrast Prokaryotic and Eukaryotic cells. **(5marks)**
3. Define a Bacillus and with the aid of a diagram distinguish between different types of Bacilli. **(5marks)**
4. Define Inflammation and outline four cardinal signs of its clinical recognition. **(5marks)**
5. Outline five ways in which pathogens establish in the tissues, multiply and cause diseases in their hosts. **(5marks)**
6. Outline the steps involved in Gram staining explaining the results. **(5marks)**
7. Nutritional requirements of bacteria are often satisfied in different ways. Explain the essential nutritional requirements of bacteria. **(5 marks)**
8. With the aid of a diagram, show the various types of flagella. **(5marks)**
9.
 - a. Define Generation time. **(2marks)**
 - b. List any Three cultural/inoculation methods. **(3marks)**
10. Describe the four stages in the metabolism of nutrients by bacteria. **(5marks)**
11. State the different types of culture media giving an example in each case. **(5marks)**
12. Describe the factors affecting bacterial growth. **(5marks)**
13. Outline the factors which influence the transmission and spread of infection/diseases. **(5marks)**
14. Tabulate the differences between Exotoxins and Endotoxins. **(5marks)**
15. With the aid of a diagram describe the bacterial growth cycle. **(5marks)**

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