



MAASAI MARA UNIVERSITY

SPECIAL UNIVERSITY EXAMINATIONS

2022/2023 ACADEMIC YEAR

SECOND YEAR SECOND SEMESTER

**SCHOOL OF NATURAL RESOURCES TOURISM AND
HOSPITALITY**

BACHELOR IN ENVIRONMENTAL MANAGEMENT

COURSE CODE: EBH 2215

COURSE TITLE: GENERAL MICROBIOLOGY

DATE: 20/4/2023

TIME: 0830-1030 HRS

INSTRUCTIONS TO CANDIDATES

Answer **ALL** questions in **Section A** and any other **TWO** questions in Section B

SECTION A: ANSWER ALL QUESTIONS (30MARKS)

1. Define the following terms **(3marks)**
 - a. Innate immunity
 - b. Adaptive immunity
 - c. Mutualism
2. Outline three difference between eukaryotic and prokaryotic genome **(3mark)**
3. Distinguish the following terms as used in microbiology: **(3mark)**
 - a. Anabolism and catabolism
 - b. Obligate aerobes and facultative anaerobes
4. Describe the similarities between the glycolysis and fermentation **(3marks)**
5. List three habitats of microbes based on temperature **(3marks)**
6. Name three products of krebs cycles **(3marks)**
7. Define and explain phagocyte and phagocytosis **(4marks)**
8. List three stages of inflammation **(3marks)**
9. Name three industrial microbiology application of fermentation **(3marks)**
10. State three isolation techniques that are used are used in microbiology **(3marks)**

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

11. Describe the chemical reaction involved in glycolysis **(20marks)**
12. Discuss the mechanism of genetic recombination in microbes **(20marks)**
13. With examples explain the symbiotic interaction between organisms and other microbes **(20marks)**
14. Using illustration, describe phases of bacteria growth curve **(20marks)**

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