



**AMREF INTERNATIONAL UNIVERSITY**  
**SCHOOL OF PUBLIC HEALTH**  
**DEPARTMENT OF COMMUNITY HEALTH**  
**BACHELOR OF SCIENCE IN COMMUNITY HEALTH**  
**END OF SEMESTER EXAMINATION APRIL 2024**

**UNIT CODE:** CHP 124

**UNIT NAME:** MICROBIOLOGY

**DATE:** 18<sup>th</sup> April, 2024

**TIME:** TWO Hours      **Start: 4:30 PM**      **Finish: 6: 30 PM**

**INSTRUCTIONS**

1. This exam is marked out of 70 marks
2. This Examination comprises TWO Sections  
**Section A:** Compulsory Question (30 marks)  
**Section B:** Long Answer Questions (40 marks)
3. All questions in Section A are compulsory and Answer any TWO questions in Section B
4. Any aspect of cheating detected during and or after the exam administration will lead to nullification of your exam
5. In case you have any questions call the invigilator on +254 720592609 or Head of Department on Tel +254720573449
6. For adverse incidences please write an email to: [amiu.examinations@amref.ac.ke](mailto:amiu.examinations@amref.ac.ke)

**SECTION A: SHORT ANSWER QUESTIONS:COMPULSORY (30 Marks)**

1. Highlight the difference between the theory of Abiogenesis and Biogenesis. (4 marks)
2. State four major contributions of Louis Pasteur (1822-1895) to microbiology (4 marks)
3. Outline the classification of fungi based on their mode of nutrition. (3 marks)
4. Define the following terms as used in bacterial pathogenesis.
  - i. Virulence (1 marks)
  - ii. Pathogenicity (1 mark)
5. State three viral infections in man. (3 marks)
6. Identify four methods used in microbial culture preservation. (4 marks)
7. Outline classification bacteria on basis of shapes/symmetry. (4 marks)
8. Identify two types of heat sterilization methods used in the laboratory. (4 marks)
9. State two important applications of bacteriophages. (2 marks)

**SECTION B : LONG ANSWER QUESTIONSANSWER ANY TWO (2) QUESTIONS (40 Marks)**

10. Discuss
  - a. The bacterial growth curve (10 marks)
  - b. The gram staining procedure in bacteria identification (10 marks)
11. Describe the types of fungal infections (Mycoses) and their manifestations (20 marks)
12. Discuss giving examples the symbiotic relationships between bacteria and other organisms based on the following.
  - a. Commensalism (5 marks)
  - b. Mutualism (5 marks)
  - c. Pathogens (10 marks)