



AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF PUBLIC HEALTH
DEPARTMENT OF COMMUNITY HEALTH
BACHELOR OF SCIENCE IN COMMUNITY HEALTH
END OF SEMESTER EXAMINATION
AUGUST 2026

UNIT CODE: CHP 124 MICROBIOLOGY

DATE: 5TH AUGUST, 2026

TIME: TWO Hours

Start: 5:30PM

Finish: 7:30PM

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)

SECTION A: COMPULSORY (30 Marks)

Short Answer Questions

1. Outline three ways in which micro-organisms are of economic importance to humans. (3 marks)
2. Highlight the general characteristics of fungi that distinguish them as a taxonomic group. (4 marks)
3. State the Kochs postulate. (4 marks)
4. Classify bacteria by shape (morphology), giving the scientific term and an example organism for each shape (4 marks)
5. Distinguish between pathogenicity and virulence how each contributes to the outcome of a bacterial infection. (4 marks)
6. Outline four general characteristics of viruses that make them unique among micro-organisms. (4 marks)
7. Highlight four methods used in the laboratory for identification of microbes. (4 marks)
8. State three methods used in the preservation of microbial cultures. (3 marks)

SECTION B

ANSWER ANY TWO (2) QUESTIONS (40 Marks)

Long Answer Questions

9. A sputum sample from a patient suspected of having a bacterial respiratory infection is provided in the laboratory.
 - a) Describe how you would prepare and Gram-stain the specimen and interpret the results. (14 marks)
 - b) Identify three factors contributing to antimicrobial resistance (AMR) in Kenya today (6 marks)
10. With reference to fungal infections
 - a) Classify fungal infections of humans into superficial, subcutaneous, and systemic mycoses. (15 marks)
 - b) Outline the prevention and control strategies for systemic mycoses, with reference to immunocompromised patients. (5 marks)

11. Viral infections are increasingly becoming a major threat to global infectious disease profiles. Discuss

- a) The viral reproduction cycle when an individual is infected. (15 marks)
- b) Preventive strategies for viral infections. (5 marks)

