



**AMREF INTERNATIONAL UNIVERSITY**  
**SCHOOL OF PUBLIC HEALTH**  
**DEPARTMENT OF COMMUNITY HEALTH**  
**BACHELOR OF SCIENCE IN HEALTH RECORD/ BSc COMMUNITY HEALTH**  
**END OF SEMESTER EXAMINATION AUGUST 2025**

**UNIT CODE: HRI 104 UNIT NAME: BASIC MICROBIOLOGY**

**DATE: 6 AUGUST 2025**

**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)

**SECTION A: COMPULSORY (20 Marks)**

1. Define and distinguish between prokaryotic and eukaryotic cells. 6mks
2. Outline four examples of pathogenic Gram-negative bacteria. 6mks
3. State four differences between bacterial and fungal cell structures. 6mks
4. Outline two fungal infections affecting immunocompromised individuals. 6mks
5. Differentiate between obligate aerobes and facultative anaerobes. 6mks

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

1. An outbreak of ringworm is reported in a boarding school. As a team leader on a disease outbreak investigation assignment;
  - a) Identify the causative agent and classify the type of mycosis. 4mks
  - b) Outline the general characteristics of fungal pathogens. 8mks
  - c) Explain the identification methods and control strategies for fungal and yeast infections in healthcare settings. 8mks

2. **a)** Describe the structure of a typical bacterial cell (10 marks)  
**b)** Explain how environmental factors such as temperature and pH affect bacterial growth (10 marks)
  
3. **a)** Compare and contrast the general characteristics and diseases caused by *Staphylococcus aureus* and *Streptococcus pyogenes* (10 marks)  
**b)** Outline the laboratory methods used in identification of these organisms (10 marks)

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