



# MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

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## University Examinations 2024/2025

SECOND YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR  
OF COMMUNITY HEALTH DEVELOPMENT

### HPP 3202: MEDICAL MICROBIOLOGY

DATE: JANUARY 2025

TIME: 3 HOURS

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#### INSTRUCTIONS:

Answer *question One and any other Two questions*

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#### SECTION A: Question 1 (Short answer questions - 30 marks)

##### Answer all questions

- a. Define the following terms
    - i. Zoonosis (1 mark)
    - ii. Pathogen (1 mark)
    - iii. Virus virulence (1 mark)
  - b. Outline any two diseases caused by *Staphylococcus aureus* (2 marks)
  - c. Describe the difference between primary and secondary cell lines (2 marks)
  - d. Outline a discovery by Alexander Fleming (1881-1955) that contributed greatly in microbiology (2 marks)
  - e. Outline the atmospheric requirements for the bacterial growth (3 marks)
  - f. Outline diseases caused by Human Papillomavirus (3 marks)
  - g. Describe phases in bacterial growth (5 marks)
  - h. Describe stages in viral replication (5 marks)
  - i. Describe opportunistic fungal infections (5 marks)
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**SECTION B: Question 2, 3 and 4 (Long answer questions - 20 marks each)**

**Choose any two questions in this section**

**Question 2**

- a. Describe Family Orthomyxoviridae (10 marks)
- b. Discuss the safety and guidelines in collection and handling of clinical specimen from various body parts (10 marks)

**Question 3**

- a. Discuss cutaneous mycoses (10 marks)
- b. Discuss the moist heat methods of sterilization (10 marks)

**Question 4**

- a. Discuss Family Enterobacteriaceae (10 marks)
- b. Describe Polymerase Chain Reaction as a medical diagnostic tool (10 marks)