



KENYATTA UNIVERSITY
EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN
COMMUNITY HEALTH

PCH 201: MICROBIOLOGY FOR COMMUNITY HEALTH

1ST SEMESTER 2022/2023

TIME: 2 HOURS

INSTRUCTIONS:

- i. Answer ALL Questions in Section A.
- ii. Answer Question FIVE and any other TWO Questions in Section B.

SECTION A: 20 MARKS

1. Giving examples, enumerate five different types of infectious organisms based on their oxygen requirements (5 marks)
2. State Koch's postulates of pathogenesis of communicable diseases with one exception (5 marks)
3. Explain briefly the Ziehl-Neelsen staining technique for diagnosis of *Mycobacterium tuberculosis* (5 marks)
4. State the mode of action of any five virulence factors that organisms use to cause diseases (5 marks)

SECTION B: 50 MARKS

Answer question 5 and any other two questions in this section

5. a) Using a well labelled diagram, describe the growth curve of *Escherichia coli* (12 marks)
- b) Explain how temperature affects the growth of microorganisms causing diseases (8 marks)

6. a) State any three practical applications of each of the following chemical disinfectants (12 marks)
- i) Phenolic compounds
 - ii) Iodine
 - iii) Formaldehyde
 - iv) Heavy metals
- b) Outline the mode of action of any three forms of dry heat used in sterilization of objects (3 marks)
7. a) Describe the importance of microorganisms in public health (10 marks)
- b) Outline five differences between prokaryotes and eukaryotes (5 marks)
8. a) Using appropriate examples, describe five types of diseases (10 marks)
- b) State five periods of an infectious disease (5 marks)