

**CHUKA**



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**UNIVERSITY EXAMINATIONS**

**RESIT/SPECIAL EXAMINATION**

**EXAMINATION FOR THE AWARD OF CERTIFICATE IN ANIMAL HEALTH AND  
PRODUCTION**

**ANHE 00122: MICROBIOLOGY**

**STREAMS: CERTIFICATE ANHE**

**TIME: 2 HOURS**

**DAY/DATE: MONDAY 28/08/2023**

**8.30 A.M – 10.30 A.M.**

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**INSTRUCTIONS:**

**SECTION A: ATTEMPT ALL QUESTIONS (40 MARKS)**

1. Briefly define the following terms as used in microbiology: (5 marks)
  - a) Animal Disease
  - b) Virulence
  - c) Cell
  - d) Prions
  - e) Stains
2. Write short notes on the history of microscopy. (5 Marks)
3. Viruses are not classified as true living cells. Explain this statement. (5 Marks)
4. List any 5 characteristics of Fungi. (5 Marks)
5. Describe the structure of a bacterial cell using a simple well labeled diagram (5 Marks)
6. For microorganisms to cause disease, they have to get into an animals body. Briefly outline means by which microorganisms are transmitted. (5 marks)
7. Outline characteristics of a good disinfectant to use in the laboratory. (5 Marks)
8. Describe various methods of identifying bacterial colonies in the laboratory. (5 Marks)

**SECTION B: ATTEMPT ANY 2 QUESTIONS (30 MARKS)**

9. Bacteria can be categorized majorly as Gram Positive or Gram Negative.
- a) Differentiate gram positive and gram negative bacteria based on the structure of the cell wall. (6 marks)
  - b) Outline the step by step procedure of doing a Gram Stain on a specimen. (5 marks)
10. Microscopes are vital tools of microbiology;
- a) Using a simple well labeled diagram describe the different parts of a light microscope. (5 Marks)
  - b) How should we take care and use a light microscope? (5 marks)
  - c) Describe the procedure of observing a specimen using the light microscope. (5 marks)
11. For bacteria to be identified, they have to be grown in the laboratory.
- a) Describe 3 types of culture media giving examples and their characteristics. (6 marks)
  - b) Outline various equipment used in bacterial culture and their uses. (5 marks)
  - c) Differentiate disinfection and sterilization. (4 marks)
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