



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF HEALTH SCIENCES**

**UNIVERSITY EXAMINATION FOR TVET DIPLOMA IN COMMUNITY HEALTH
AND DEVELOPMENT**

1ST YEAR 2ND SEMESTER 2023/2024 ACADEMIC YEAR

MAIN CAMPUS

COURSE CODE: HDC 2125

COURSE TITLE: APPLY MICROBIOLOGY AND PARASITOLOGY

EXAM VENUE: STREAM: (TVET Dip Comm Health & Dev)

DATE: EXAM SESSION:

TIME: 2.00 HOURS

Instructions:

- 1. Answer all the questions in Section A and ANY other 2 questions in Section B.**
- 2. Candidates are advised not to write on the question paper.**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room.**

SECTION A: ANSWER ALL QUESTIONS (30 MARKS)

1. Compare and contrast staphylococci and streptococci bacteria (2 marks)
2. What are microorganisms and why are some parasites not considered microorganisms (2 marks)
3. How does the Gram stain work to distinguish between gram positive and gram-negative cell walls?
(2 marks)
4. What is the difference between?
 - a. Commensalism and parasitism (1 mark)
 - c. Definitive and intermediate host (1 mark)
 - d. Biological vector and mechanical vector (1 mark)
5. Which TWO features of viruses are used to distinguish them from other microorganisms?
(2 marks)
6. As a community health worker, explain THREE pieces of advice you can give students in a boarding primary school on prevention of fungal diseases. (3 marks)
7. Some of the organisms that cause respiratory tract infections are part of the normal flora. Explain TWO factors that can cause normal flora to change to infection-producing organisms (2 marks)
8. What makes *T. solium* more severe than *T. saginata*? (1 mark)
9. Antimicrobial resistance is a growing serious threat to Public Health. Explain TWO ways how it develops and how we can mitigate it. (3 marks)
10. Explain what neglected tropical diseases are, their significance to community health and give two examples of the diseases in Kenya. (4 marks)
11. Explain the general prevention and control methods of amoeba. (3 marks)
12. Explain the general mode of transmission of trematoda by giving examples. (3 marks)

SECTION B: ANSWER ANY TWO QUESTIONS

1. Explain heat as a mode of physical control of microbial growth (15 marks)
2. Using examples discuss the direct mode of transmission of parasitic infections (15 marks)
3. Discuss giving examples, non-bacterial causes of gastrointestinal disease (15 marks)
4. Draw a properly labelled diagram of a bacterial growth curve. compare and contrast the different phases of growth you have illustrated (15 marks)