



**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: APPLIED 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 TWO 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 (40 MARKS)

1. What is the major difference between prokaryotes and eukaryotes? Give examples. (2 marks)
2. Using diagrams, show the difference between streptococci and staphylococci (2 marks)
3. List TWO benefits of normal flora in the human host (2 marks)
4. How do you differentiate amoebic dysentery from bacillary dysentery? (2 marks)
5. How does the Gram stain works to distinguish between gram positive and gram negative cell walls (2 marks)
6. What is the difference between? Give examples of each.
 - a) Obligate and temporary parasite (2 marks)
 - b) Definitive and intermediate host (2 marks)
 - c) Biological vector and mechanical vector (2 marks)
 - d) Ecto-parasite and endo-parasite (2 marks)
8. What's the major difference between parasitic protozoa and metazoa? Give examples.(2 marks)
9. Classify protozoan parasites according to site of infection and give examples (3 marks)
10. Differentiate the mechanism of action of microbicidal and microbistatic control agents (2 marks)
11. As a community health worker, what mechanisms can you take to prevent and control fungal diseases (3 marks)
12. List TWO characteristics of viruses that distinguish them from other microorganisms (2 marks)
13. List TWO ways through which water serves as a source of bacterial and parasitic infections. (2 marks)
14. List and explain THREE symbiotic relationships exhibited by organisms (3 marks)
15. As a community health worker, explain THREE measures you would use to try to ensure GIT infections are eradicated (3 marks)
16. List at least TWO beneficial and TWO harmful activities of microorganisms. (2 marks)

SECTION B: ANSWER ANY FOUR QUESTIONS (60 MARKS)

1. Methods of microbial control used outside of the body are designed to result in four possible outcomes. Explain. (15 marks)
2. Discuss giving examples any THREE sources of exposure to parasitic infections (15 marks)
3. Discuss the mechanisms by which parasites impose their effect on the host. (15 marks)
4. State and explain SIX important factors that involve the chain of communicable disease transmission then using Malaria as an example, show how knowledge of the chain can be used in prevention and control of Malaria (15 marks)
5. State and explain any THREE factors affecting growth of microorganisms (15 marks)
6. Explain the different approaches used in vector control (15 marks)