



**AMREF INTERNATIONAL TRAINING CENTER**

**Qualification Code** : 102106T4COH

**Qualification** : Community Health Level 6

**Unit Code** : HE/OS/CH/CC/05/6/A

**Unit of Competency** : Apply Microbiology & Parasitology

**WRITTEN ASSESSMENT**

**Time: 3 HOURS**

**INSTRUCTIONS TO CANDIDATE**

1. Marks for each question are indicated in the brackets.
2. The paper consists of **TWO** sections: **A** and **B**.
3. Candidates are provided with a separate answer booklet
4. **DO NOT** write on this question paper.

**This paper consists of FOUR (4) printed pages**

**Candidates should check the question paper to ascertain that all pages are printed as indicated and that no questions are missing.**

**SECTION A: (40 MARKS)**

*Answer ALL the Questions in This Section*

1. State THREE relevance of studying parasitology in community health (3 Marks)
2. A parasite is an organism that depends on a host and gets its nutrients from it.  
Distinguish between Pathogenic parasite and Opportunistic parasite (3 Marks)
3. Bacterial cells possess a rigid cell wall that plays a crucial role in maintaining structural integrity. Using principles from microbiology. Identify FOUR functions of the bacterial cell wall (4Marks)
4. Differentiate between Gram positive and Gram-negative bacteria (4Marks)
5. Stool analysis is vital in the determination of parasites through laboratory investigation. Name FOUR parasites that can be detected by conducting stool examination process (4 Marks)
6. Killing microorganisms with chemical agents or by physical means involves a first-order reaction. Enumerate THREE physical methods of sterilization. (3 Marks)
7. Bacteria are classified into groups according to their basic shapes. Outline THREE groups of bacteria based their shapes (3Marks)
8. Microbes require appropriate environmental conditions for them to thrive.  
Highlight FOUR conditions that promote microbial growth (4 Marks)
9. Cholera cases have continued to be reported in Kenya over past years, the Ministry of Health is working closely with community health workers to prevent and control the outbreak of the diseases. Outline FOUR risk factors for the emergence of cholera outbreak (4 Marks)
10. Corona virus is a very infectious viral disease of public health concern. As a healthcare worker. With reference to the statement outline FOUR characteristics of a virus (4 Marks)
11. Protozoa have been divided based on their mode of locomotion. Identify FOUR divisions of a protozoa based on their locomotory structure. (4 Marks)

**SECTION B: (60 MARKS)**

**Answer Question 12 and any other TWO questions**

12. Mrs. XYZ brought her son to hospital Q. The son complained of persistent coughing, chest pains and night sweat. Upon consultation the doctor requested for a tuberculosis test by culturing the patient sputum

- a) Using microbial growth curve describe FOUR the phases of microbial growth in a batch culture (10marks)
- b) Explain FIVE ways of preventing and controlling spread of Tuberculosis in the community (10 Marks)

13. Malaria cases have continued to be reported in Kenya over the past years. The Ministry of Health is working closely with community health workers to control and prevent such outbreaks.

- a) Explain TWO roles of community health workers in prevention and control of malaria parasitic disease (4 Marks)
- b) Discuss THREE risk factors to malaria (6 Marks)
- c) Describe the lifecycle of Plasmodium falciparum (10 marks)

14. The spread of an infection within a community is described as a “chain,” and it involve several interconnected steps that describe how a pathogen moves about

- a) Discuss SIX elements in the chain of disease transmission. (12 Marks)
- b) Describe FOUR modes of transmitting infectious agents (8 Marks)

15. Natural history of disease refers to the progression of a disease process in an individual over time, in the absence of treatment.

- a) Discuss THREE different levels of disease prevention. (6 Marks)
- b) Discuss the six stages of disease progression. (12marks)