

**102106T4COH**

**COMMUNITY HEALTH LEVEL 6**

**HE/OS/CH/CC/05/6/A**

**Apply Basic Microbiology and Parasitology**

**Nov/Dec 2023**



**TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION  
COUNCIL (TVET CDACC)**

**WRITTEN ASSESSMENT**

**Time: 3 HOURS**

**INSTRUCTION TO CANDIDATE**

1. This paper has two sections **A** and **B**
2. You are provided with a separate answer booklet
3. Marks for each question are as indicated
4. Do not write on the question paper

**This paper consists of three (3) printed pages.**

**Candidates should check the question paper to ascertain that all the pages are printed as indicated.**

**SECTION A: (40 MARKS)**

***Answer ALL the questions in this section***

1. Bacterial diseases can affect your skin, lungs, brain, blood and other parts of your body. Enumerate THREE bacterial diseases. **(3 Marks)**
2. A parasite is an organism that depends on a host and gets its nutrients from it. Giving one example in each, differentiate between Ectoparasites and Endoparasites. **(4 Marks)**
3. Bacterial cell forms a rigid structure of uniform thickness around the cell. Highlight FOUR functions of a bacteria cell wall. **(4 Marks)**
4. Bacteria are classified into groups according to their basic shapes. Identify FOUR characteristics used to classify bacteria. **(4 Marks)**
5. Stool analysis is vital in the determination of parasites through laboratory investigation. State FOUR endo-parasites that might be present in stool. **(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. Protozoa have been divided based on their mode of locomotion. State FOUR characteristics of a protozoa. **(4 Marks)**
8. Microbes requires appropriate environmental conditions for them to thrive. Highlight FOUR conditions that promote the growth of microbes. **(4 Marks)**
9. Natural history of a disease is the course of a disease in an individual over time in the absence of any intervention. Outline FOUR stages involved. **(4 Marks)**
10. A virus is a submicroscopic infectious agent that replicates only inside the living cells of an organism. As a healthcare worker, outline THREE characteristics of the virus. **(3 Marks)**
11. Disease agents are transmitted from one person to another using different modes. Identify THREE modes of disease transmission **(3 Marks)**

**SECTION B: (60 MARKS)**

*Answer any THREE questions in this section.*

12. Bacteria require certain conditions for growth, and these conditions are not the same for all bacteria. The conditions help the bacteria to grow, increasing its virulence and infectivity in the host. Bacteria are found on surfaces we interact with, for example, our desks, books, doors and even clothes.
- a) Discuss FOUR methods of controlling these bacteria in our environments. **(8 Marks)**
  - b) Describe the FOUR phases of microbial growth. **(12 Marks)**
13. Cholera 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) Discuss SIX possible risk factors for the emergence of a cholera outbreak. **(12 Marks)**
  - b) Using a diagram, illustrate the transmission cycle of cholera. **(8 Marks)**
14. The transmission of pathogens from current to future hosts follows a repeating cycle. This cycle is called the disease transmission cycle.
- a) Discuss SIX elements in the chain of disease transmission. **(12 Marks)**
  - b) Describe FOUR symptoms of tuberculosis **(8 Marks)**
15. There is a wide range of eukaryotic organisms, including all animals, plants, fungi, and parasites.
- a) Draw a diagram of eukaryotic cell indicating FIVE well-labelled organelles. **(10 Marks)**
  - b) Explain ONE function each of the FIVE organelles in a eukaryotic cell. **(10 Marks)**

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