

102105T4COH

COMMUNITY HEALTH LEVEL 5

HE/OS/CH/CC/04/5/A

Apply basic microbiology and parasitology

Nov/Dec 2024



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

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 THREE (3) 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. The quality of the specimens submitted for the microbiological investigation is critical for optimal specimen evaluation. State **FOUR** specimens that may be required for medical examination. (4 Marks)
2. The living organism in which the infectious agents can find a home is considered as a living reservoir. Outline **FOUR** living reservoirs (4 Marks)
3. Highlight **FOUR** viral Diseases of Public Health importance that may be present in County X (4 Marks)
4. The various types of vaccine are designed to teach your immune system how to fight off certain kinds of germs and the serious diseases they cause. Enumerate **FOUR** types of vaccines (4 Marks)
5. Bacteria are harmful to humans and can cause serious infections however some are beneficial. Highlight **THREE** benefits of bacteria (3 Marks)
6. The protozoa have many stages in their life cycle. State **TWO** reproductive cycles of protozoa (2 marks)
7. Parasites are organisms that depend on a host to survive and multiply. Distinguish between ectoparasite and endoparasite (2 marks)
8. Sterilization destroys all microorganisms through physical or chemical methods. Identify **THREE** physical methods of sterilization (3 Marks)
9. Gram stain is one of the most important techniques to all the bacterial microbiological processes. Outline **FOUR** importance of gram staining (4 marks)
10. Helminth infections are caused by different species of parasitic worms. Highlight **THREE** helminthic parasites (3 Marks)
11. Natural history of disease refers to the progression of a disease process in an individual over time, in the absence of treatment. Name **FOUR** stages of disease progression (4 Marks)
12. State **THREE** Personal Protective Equipment's you may use when handling highly infectious viral diseases in the community (3 Marks)

SECTION B (60 MARKS)**Answer any THREE questions in this section.**

13. A 28-year-old male patient was admitted to the male ward in Hospital X, he presented with complaints of fever for 1 week, body ache, headache, slightly yellowish sclera and watery eyes. Provisional diagnosis indicated the he had Typhoid. You are therefore required to educate the mentioned patient
- Identify the causative agent for Typhoid (2 Marks)
 - Discuss **FOUR** risk factors to typhoid (8 Marks)
 - Describe **TWO** complication associated with untreated Typhoid (4 Marks)
 - Use epidemiologic disease triad to explain **THREE** ways of breaking the typhoid transmission cycle (6 Marks)
14. Mr. X a 61-year-old male patient with previously confirmed COVID-19 infection developed nosocomial pneumonia while in hospital Z. He works in the hospital as the head of procurement department. His Children who are below 2 years have also reported pneumonia-like symptoms. As a community health assistant, you are required to educate the family on various ways of preventing community disease transmission.
- Describe **FOUR** ways of preventing nosocomial diseases (8 Marks)
 - Explain **SIX** components of the chain of disease transmission (12 Marks)
15. Bacteria require optimum conditions for their growth, and these increases its virulence and infectivity in the host. As health professional in county **Y**, you are authorized by your supervisor to teach the Community Health Promoter in the county.
- Identify **FIVE** physical conditions necessary for bacteria growth. (5 Marks)
 - With a labeled diagram illustrate the bacterial growth curve. (7 Marks)
 - Describe **FOUR** phases of the bacterial growth curve (8 Marks)
16. Mr. X a resident of Runa Village in County X, has been complaining of bedbug infestation in his house. He has tried to eradicate them but he has not been successful. As a community health assistant, you are required to educate Mr. X on how he can control and prevent future bedbug infestations
- Describe **THREE** Signs of bedbug Infestation (6 Marks)
 - Explain **THREE** ways in which bedbug can spread in the above-mentioned county (6 Marks)
 - Discuss **FOUR** ways of preventing bedbug infestation (8 Marks)