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COMMUNITY HEALTH LEVEL 6

HE/OS/CH/CC/05/6

Apply Basic Microbiology and Parasitology

November/December 2025

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

WRITTEN ASSESSMENT

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TIME: 3 HOURS

INSTRUCTIONS TO CANDIDATE

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1. This paper consists of **TWO** sections: **A** and **B**.
2. Answer **ALL** questions in section A.
3. Answer **ANY THREE (3)** questions in Section B.
4. Marks for each question are indicated in the brackets.
5. Candidates are provided with a separate answer booklet.
6. Do not write on the question paper.

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This paper consists of THREE (3) printed pages.

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Candidate 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 questions from this section.

1. Amoebas are protozoan organisms found in soil and water, some of which are pathogenic to humans. Highlight FOUR signs and symptoms of amoebic dysentery. (4 Marks)
2. Pneumonia is a serious bacterial lung infection caused by *Streptococcus pneumoniae*. Outline FOUR signs and symptoms of pneumonia. (4 Marks)
3. Commensalism is a symbiotic relationship where one organism benefits while the other is unaffected. Outline THREE examples of commensal organisms in humans. (3 Marks)
4. Virology is the study of viruses and their role in human disease. Identify FOUR benefits of studying virology. (4 Marks)
5. Accurate specimen collection is critical in detecting parasitic infections. Identify FOUR types of specimens required for diagnosis of malaria. (4 Marks)
6. Hookworms are intestinal parasites acquired through contact with contaminated soil. Outline FOUR signs and symptoms of hookworm infection. (4 Marks)
7. Parasites invade specific human tissues for nourishment. Identify THREE organs where protozoan parasites are commonly found. (3 Marks)
8. Rabies is a viral disease transmitted through the bite of infected animals. Enumerate THREE other zoonotic viral infections in humans. (3 Marks)
9. Chlamydia is a bacterial sexually transmitted infection (STI). Highlight THREE signs and symptoms of chlamydia infection. (3 Marks)
10. Yellow fever is a viral hemorrhagic disease transmitted by *Aedes* mosquitoes. State FOUR preventive measures against yellow fever. (4 Marks)
11. Yeasts are single-celled fungi with wide application in biotechnology. Outline FOUR beneficial effects of yeasts. (4 Marks)

SECTION B (60 MARKS)

Answer any THREE questions in this section.

12. Helminthic infections are prevalent in tropical regions with highest rate of transmission in marginalized communities.

- a. Using examples, explain FIVE modes of transmission of helminths. (10 Marks)
- b. Discuss FIVE challenges in the prevention and control of helminth infections.

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(10 Marks)

13. A cholera outbreak was reported in Vanga Community Health unit in the south coast of Kenya. Community health officers in the area are working tirelessly to curb the spread in the predominantly fishing community.

- a. Outline FOUR clinical features of cholera. (4 Marks)
- b. Explain FOUR risk factors that contribute to cholera transmission. (8 Marks)
- c. Discuss FOUR measures the community health officers are sensitizing the community to prevent cholera outbreaks. (8 Marks)

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14. HIV/AIDS continues to affect communities worldwide. The Kenyan Government efforts in reducing the prevalence of this pandemic is championed by community health promoters at Level 1 of health care service delivery.

- a. Analyze FIVE possible risk factors for HIV transmission in marginalized populations. (10 Marks)
- b. Discuss FIVE stages in the replication of retroviruses. (10 Marks)

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15. Microorganisms play important roles in industry and health. In order to thrive and multiply, they require optimum and favorable conditions.

- a. Draw and label a microbial growth curve. (5 Marks)
- b. Explain the FOUR phases of microbial growth. (8 Marks)
- c. Identify FOUR Gram-positive bacteria. (4 Marks)
- d. State THREE industrial applications of bacteria. (3 Marks)

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