



AMREF INTERNATIONAL TRAINING CENTER

DIPLOMA IN COMMUNITY HEALTH (DCH) LEVEL 6

HE/CU/CH/CC/02/5/MA

Apply Microbiology and Parasitology

END OF TERM EXAM

DATE: 12TH AUGUST 2026

Time: 2 HOURS START: 9AM FINISH: 11AM

INSTRUCTIONS TO CANDIDATE

1. You have THREE hours to answer all the questions.
2. Marks for each question are indicated in the brackets.
3. The paper consists of TWO sections: A and B.
4. Do not write on the question paper.
5. A separate answer booklet will be provided.

This paper consists of FIVE (6) printed pages

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

SECTION A: ANSWER ALL QUESTIONS (40MARKS)

1. In a rural village, the community health assistant (CHA) discovers that children are frequently sick with diarrhoeal diseases after drinking from a river. She suspects waterborne microorganisms are responsible.
 - a) Define the term microorganism as used in community health. [2 Marks]
 - b) Identify FOUR types of microorganisms that are common causes of waterborne diseases in community settings. [4 Marks]
2. After visiting a household where a child is diagnosed with intestinal worms. The mother is unsure what parasites are or how her child got infected.
 - a) Distinguish between endoparasites and ectoparasites, giving ONE example of each . [4 Marks]
 - b) State TWO common hosts (other than humans) through which parasites can be transmitted in rural communities. [2 Marks]
3. During a home visit, a CHA observes that a mother stores cooked food at room temperature overnight and uses untreated well water for cooking. Cases of food poisoning have been reported in this household.
 - a) Name FOUR conditions that favour the growth of microorganisms in food and water. [4 Marks]
 - b) Recommend TWO food handling and storage practices the CHA should advise this household.

4. A sub-county reports a sudden rise in malaria cases following heavy rains. As a community health worker, you are asked to explain malaria transmission to community members during a health talk.

- a) Identify the causative organism of malaria and name the vector responsible for its transmission. [2 Marks]
- b) Outline THREE stages in the life cycle of the malaria parasite that occur inside the human body. [3 Marks]
- c) List TWO disease prevention measures applicable at the community level to reduce malaria transmission. [2 Marks]

5. A health facility in a peri-urban area records increased cases of tuberculosis (TB) among adults. The community health team is tasked with conducting contact tracing and health education.

- a) State the causative organism of tuberculosis. [1 Mark]
- b) Describe the mode of transmission of TB relevant to crowded community settings.[2 Marks]
- c) Mention TWO signs and symptoms of TB that a CHA should look for during a household visit. [2 Marks]

6. An informal settlement experiences a cholera outbreak. The county health team engages community health workers to help contain the spread.

- a) Identify the causative organism of cholera. [1 Mark]
- b) State THREE risk factors in this settlement that contributed to the outbreak. [3 Marks]

c) Propose TWO immediate community-level interventions to prevent further spread of cholera. [2 Marks]

7. A community health assistant notes that many children in a school have signs of helminth infection: pot belly, pallor, and stunted growth. The school lacks hand-washing facilities.

a) Classify helminths, giving ONE example for each class relevant to communities in Kenya. [3 Marks]

b) Explain the role of deworming as a community-level parasitic disease control measure. [2 Marks]

8. During a community mobilization meeting, residents ask the CHA to explain why some diseases spread faster during certain seasons.

Identify FOUR modes of disease transmission as taught in the microbiology and parasitology unit, and for EACH, give a community-relevant example. [4 Marks]

SECTION B: 60MARKS

ANSWER THREE QUESTIONS

9. You have been assigned as a Community Health Assistant in a newly established community unit in a rural area with high prevalence of parasitic diseases including malaria, intestinal worms, and amoeba.

a) Describe FIVE signs and symptoms that would help you identify parasitic infections during household visits in this community. [10 Marks]

b) Explain FIVE disease prevention and control measures you would apply in this community to reduce the burden of parasitic diseases, linking each measure to its mode of action. [10 Marks]

10. A measles outbreak has been confirmed in a peri-urban community with low immunization coverage. As part of the response team, you are required to lead community health education sessions.

a) Describe the causative organism of measles, its mode of transmission, and THREE signs and symptoms that a community health worker should recognize. [8 Marks]

b) Explain how you would apply knowledge of microbial disease transmission to design a community education session aimed at preventing further spread of measles. [12 Marks]

11. The sub-county has recorded increasing cases of typhoid fever in a market trading centre. Investigation reveals contaminated water supply and poor sanitation as key contributing factors.

a) Identify the causative organism of typhoid fever and describe its mode of transmission through the faecal-oral route in a community setting. [6 Marks]

b) Assess FOUR risk factors in market trading centres that increase vulnerability to typhoid fever and other microbial diseases. [8 Marks]

c) Recommend THREE environmental health interventions, linked to microbiology principles, that the community health team should implement to control typhoid in this setting. [6 Marks]

12. Community health practitioners must understand microbial growth and conditions that promote or inhibit disease-causing organisms in order to protect their communities.

a) Explain FIVE conditions that influence the growth and multiplication of microorganisms, giving the community health relevance of each condition. [10 Marks]

b) Describe how monitoring the incidence and prevalence of parasitic and microbial diseases contributes to effective disease prevention and control at the community level. [10 Marks]

13. STIs, including HIV, remain a significant public health challenge in many communities. Community health workers play a frontline role in prevention and health promotion.

a) Classify the causative organisms of THREE sexually transmitted infections (STIs) commonly encountered in community health practice in Kenya, and describe the mode of transmission for each. [9 Marks]

b) Outline FIVE personal hygiene and behavioural practices that a community health assistant should promote to reduce the transmission of STIs in the community. [5 Marks]

c) Explain why applying parasitology and microbiology knowledge is essential to the scope of practice of a Community Health Assistant. [6 Marks]