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COMMUNITY HEALTH LEVEL 6

HE/OS/CH/CC/03/6

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Apply Epidemiology in Community Health

Date: 20.11.2025 07:39 AM

November /December 2025

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

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Date: 20.11.2025 07:39 AM

WRITTEN ASSESSMENT

Time: 3 Hours

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INSTRUCTION TO CANDIDATE

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

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**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)***Attempt ALL the questions in this section***

1. A research study design spells out the strategies that the researcher adopts to develop information that is accurate, objective and interpretable. List any FOUR qualitative study designs. (4 Marks)
2. Disease surveillance activities involve identifying the disease patterns in the area with key emphasis on identifying the mortality rate patterns, and identifying both the endemic and epidemic disease in that area. Outline the FOUR steps in planning a disease surveillance system. (4 Marks)
3. During community health population screening, you as the community health worker require to collect data from the community using various methods. Identify any FOUR such methods. (4 Marks)
4. Alexander Langmuir [1963] defined the concept of disease surveillance to mean the continued watchfulness over the distribution and trends of incidence of a communicable disease. Record FOUR roles of a clinician in integrated diseases surveillance and response. (4 Marks)
5. According to the WHO, community diagnosis is a quantitative and qualitative description of the health of citizens and factors which influences, identifies problems and stimulates action. Outline FOUR steps in community health diagnosis. (4 Marks)
6. Measures of association compare disease occurrence among one group with disease occurrence in another group. List FOUR measures of association. (4 Marks)
7. Relative risk, compares the risk of a health event (disease, injury, risk factor or death) among one group with the risk among another group. Identify any TWO possibilities when calculating relative risk. (4 Marks)
8. Health interventions are important in ensuring continued positive health outcomes in the community. Name any FOUR acceptable health interventions to control and prevent the spread of diseases. (4 Marks)
9. After the community screening activity, the community health worker does a report to disseminate the findings to community members. Outline FOUR methods through which you can disseminate the report. (4 Marks)
10. The ministry of health in Kenya identified 13 communicable diseases and conditions for Integrated Disease Surveillance and Response. Mention FOUR such notifiable diseases in Kenya. (4 Marks)

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

11. a) Carrying out a disease surveillance involves several steps that involves an investigation and reporting of a disease outbreak. Describe FIVE steps involved in the investigation of a disease outbreak. (10 Marks)
- b) Population screening needs assessments/screening is the process that describes the states of health of the local people, enables the identification of the major risk factors and causes of the ill health. Explain FIVE steps in community health needs assessment. (10 Marks)
12. a) As a community health worker, you will be tasked with a responsibility of planning and developing a population screening plan or project. Before embarking on the visit to the community for population screening, there are several factors that you need to consider. Review any FIVE such factors. (10 Marks)
- b) Measures of association compare disease occurrence among one group with disease occurrence in another group. Explain the interpretation of the relative risk and the odds ratio in the following scenarios:
- i) Relative risk is equal to 1 (1 Mark)
 - ii) Relative risk is greater than 1 (1 Mark)
 - iii) Relative risk is less than 1 (1 Mark)
 - iv) Odds ratio is less than 1 (1 Mark)
 - v) Odds ratio is greater than 1 (1 Mark)
- c) The epidemiological triangle shows the relationship between various elements that need to interact and be present for a disease to develop. With the aid of a labelled diagram, illustrate the epidemiological triangle. (5 Marks)
13. a) Disease surveillance systems are very important and key activities that helps the countries in monitoring and evaluating the emerging patterns and trends of diseases. Describe THREE types of surveillance used in epidemiology. (15 Marks)
- b) Once data analysis and data interpretation has been done, the community health worker prepares to disseminate the report. Name any FIVE methods of disseminating the report. (5 Marks)
14. a) Disease surveillance activities involves identifying the disease patterns in the area with key emphasis on identifying the mortality rate patterns, and identifying both the endemic and epidemic disease in that area. Describe FOUR stages of planning disease surveillance system. (8 Marks)
- b) Most diseases have a characteristic natural history although the time frame and specific manifestation of disease vary from person to person. Explain the SIX stages of the natural history of disease progression detailing the interventions that can be carried out in each stage. (12 Marks)