

102106T4COH

COMMUNITY HEALTH LEVEL 6

HE/OS/CH/CC/03/6/A

Apply Epidemiology in Community Health

March/April 2025



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

WRITTEN ASSESSMENT

Time: 3 HOURS

INSTRUCTIONS TO CANDIDATE

1. This paper consists of **TWO** sections: **A** and **B**.
2. Answer **ALL** questions in section A and **ANY THREE** (3) 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.

**This paper consists of FOUR (4) 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. Carrying out disease surveillance involves several steps that involve an investigation and reporting of a disease outbreak. Highlight FOUR steps involved in an outbreak investigation. [4 Marks]
2. Population screening helps to determine the proportion of the population affected by a particular health condition. Recommend THREE ways of obtaining data from the community during the screening process. [3 Marks]
3. A screening report must be made by the community health worker and disseminated to the community in order for the community to know the health needs that were identified. Identify THREE platforms for disseminating the report to the community. [3 Marks]
4. There was an outbreak of salmonella among members of a guest house after eating sandwiches. Out of 110 members who were tested 33 persons met the case definition. Calculate the prevalence of salmonella infection among the guest house members. [3 Marks]
5. The key to epidemiologic analysis is comparison. Identify FOUR measures of association. [4 Marks]
6. The purpose of analyzing data is to obtain usable and useful information. Mention THREE steps to follow when organizing for data analysis and interpretation. [3 Marks]
7. Timely dissemination of epidemiological reports leads to efficient interventions in the control of epidemic. Outline THREE ways of disseminating an epidemiological report. [3 Marks]
8. Selecting the appropriate research design ensures accurate collection and interpretation of data. State FOUR qualitative study designs. [4 Marks]
9. Disease can be caused by either living or non-living agents. Identify THREE categories of biological agents that cause infectious diseases. [3 Marks]
10. Hypothesis is statement that predicts the relationship between variables under study. Identify FOUR characteristics of a workable hypothesis. [4 Marks]
11. Population parameters are used to describe various aspects of a population. Highlight THREE population parameters. [3 Marks]
12. Epidemiological reports are written in a systematic order. Enumerate THREE components of methodology section of such reports. [3 Marks]

SECTION B (60 MARKS)*Answer Any THREE Questions in This Section*

13. It has been reported that there is a widespread incidence of diarrhea in village Y. As the community health assistant, you are tasked to lead a team that will investigate the occurrence.
- Elaborate the FOUR steps that you will follow in diagnosing the health of the community in village Y. [8 Marks]
 - Suggest with explanations, TWO ways that the diarrhea disease could have spread in village Y. [4 Marks]
 - Recommend FOUR acceptable health interventions that can be applied to control and prevent the spread of a disease in the community. [8 Marks]
14. As a community health worker, you are tasked with the responsibility of planning and developing a population screening project in your sub county.
- Propose FOUR factors that you will consider when planning for the population screening activity. [8 Marks]
 - Describe THREE methods you will use in obtaining data from the community members during the screening exercise. [6 Marks]
 - Explain THREE platforms you will use to disseminate the screening report to the members of the community. [6 Marks]
15. Determination of diseases progression plays a key role informing the appropriate health intervention of each disease. You are tasked with training newly employed Community Health Assistant on the identification of disease progression.
- Illustrate the stages of disease progression using an appropriate diagram. [8 Marks]
 - Explain the stage of disease progression of where the patient can progress to be a carrier. [2 Marks]
 - Critique with suitable examples, FIVE criteria used to identify notifiable diseases for Integrated Disease Surveillance and Response. [10 Marks]
16. A lung cancer screening event noted that out of 100 smokers, 30 had lung cancer while 70 did not have lung cancer. Out of 100 non- smokers, 10 had lung cancer while 90 did not have lung cancer.
- Develop a 2 by 2 contingency table to illustrate these findings. [6 Marks]

- b) Calculate the Risk ratio for the population. [5 Marks]
- c) Calculate the Odds ratio for the population. [5 Marks]
- d) Calculate the ratio of lung cancer smokers to lung cancer non- smokers. [4 Marks]