102106T4COH

COMMUNITY HEALTH LEVEL 6

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

APPLY EPIDEMIOLOGY IN COMMUNITY HEALTH

July/August 2024

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** the questions as guided in each section
3. Marks for each question are as indicated in the brackets
4. You are provided with a separate answer booklet to answer the questions
5. Do not write in this question paper

This paper consists of FIVE (5) 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. Distinguish between epidemic and endemic as applied in epidemiology. [2 Marks]

2. Community health needs assessment plays a vital role in improving the overall health status of a community. Highlight FOUR classes of health needs. [4 Marks]

3. Formulating and testing hypothesis is done before collecting and analyzing of the actual epidemiological data. Highlight FOUR characteristics of a practical hypothesis. [4 Marks]

4. Epidemiological research process helps to identify the most pressing community health needs. By giving an example, outline THREE criteria used to identify epidemiological research. [3 Marks]

5. The data below shows the blood sugar levels of five elderly females aged between 60 – 80-year-old from village X.

Name	Blood sugar level (mmol/L)
Pink	11
Green	9
Red	1
Yellow	16
Black	8

Find the population variance of the blood sugar levels of the five ladies. [4 Marks]

6. You have just concluded conducting population screening in community X. Outline FOUR platforms that you will use to disseminate the population screening report. [4 Marks]

7. It has been reported to you that 9 out of 36 youths who attended their friend's birthday party presented cholera like symptoms.

   a) Identify the epidemiological research study design you are going to use to describe the distribution and occurrence of the disease. [1 Marks]

   b) Outline THREE applications of the study design mentioned in part (a) above in epidemiological research. [3 Marks]

8. In an outbreak of Covid-19 among the medical students in college P in 2020, 12 of 56 students who won the surgical mask developed Covid-19 compared to 28 of 46 who didn't wear the surgical masks. Calculate the relative risk. [4 Marks]

9. There has been a rise in the cases of infectious diseases from biological agents in County X in the recent past. Mention FOUR biological agents that are capable of causing infectious diseases. [4 Marks]

10. There are diseases specified by the International Health Regulations (2005) for immediate notification. Mention FOUR notifiable diseases. [4 Marks]

11. Population screening describes the health of people by identification of risk factors and causes of ill-health. Identify THREE resources required to conduct a successful population screening [3 Marks]

SECTION B: [60 MARKS]

*Answer any **THREE** questions in this section*

12. County X has a population of 300,000 people. 6,000 deaths occurred during the year 2023. These included 1,000 deaths from HIV/AIDs in 8,000 people who were HIV positive.

    a) Describe the stages in the natural history of communicable diseases. [10 Marks]

    b) Explain the current techniques with emphasis on primary and secondary prevention and control of HIV/AIDs. [10 Marks]

13. An outbreak of unknown cases of a disease has been reported in your area of jurisdiction after heavy rainfall, which has serious symptoms of diarrhoea requiring hospitalization. As a Sub- County Community Health Assistant, you are required to carry out an investigation of the outbreak and report to County Health Management Team (CHMT) for appropriate control measures.

    a) Discuss FOUR methods of data collection. [8 Marks]

    b) Explain SIX steps of disease outbreak investigations you would follow. [12 Marks]

14. A Non-Governmental Organization (NGO) has employed you in Community X to conduct population screening for identification of health needs.

    a) Discuss FOUR factors you would consider for population screening in community X. [8Marks]

    b) Discuss SIX advantages of population screening to the community and the Ministry of Health. [12 Marks]

15. The table below shows data collected during community diagnosis in Nairobi County. It indicates number of mothers attending first antenatal clinic in the year 2022 - 2023 from five health centers within the County.

Health Center	2022	2023
Ruaraka	76	101
Kamukunji	123	109
Kahawa west	67	62
Mihango	89	76
Eastleigh	78	99

a) Discuss FIVE challenges faced during data collection for community diagnosis.

[10 Marks]

b) Discuss FIVE benefits of reviewing community diagnosis report before presenting it to stakeholders. [10 Marks]

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