



## AMREF INTERNATIONAL TRAINING CENTER

**Qualification Code** : 102106T4COH  
**Qualification** : Community Health Level 6  
**Unit Code** : HE/OS/CH/CC/03/6/A  
**Unit of Competency** : Apply Epidemiology in Community Health

### WRITTEN ASSESSMENT

**Time: 3 HOURS**

### INSTRUCTIONS TO CANDIDATE

1. This paper has two sections A and B
2. You are provided with a separate answer booklet
3. Marks for each question are as indicated
4. 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 the pages are printed as indicated**

**SECTION A: (40 MARKS)**

**Answer ALL the questions in this section**

1. Define the following terms:
  - a. Epidemiology: (2 marks)
  - b. Disease surveillance: (2 marks)
2. Our physical, mental, and social well-being depends on our surroundings. Identify **TWO** environmental determinants that impact the health of the community members. (4 marks)
3. Data collection in healthcare is the process of collecting, analyzing, and using the data for patient documentation and resources. State **FOUR** ways epidemiologists use to minimize errors during data collection. (4 marks)
4. Epidemiology is the study of how often diseases occur in different groups of people and why. Outline **FOUR** uses of epidemiological studies to community health work. (4 marks)
5. A cohort study examined the association between smoking and lung cancer after following 400 smokers and 600 non-smokers for 15 years. At the study's conclusion, the investigators found 180 cases in smokers and 40 cases in non-smokers. Calculate the **odds ratio** and interpret the result. (4 marks)
6. Any notifiable disease suspected or confirmed in a community should be reported to the relevant authority immediately according to the disease notification protocols. List **FOUR** notifiable diseases in Kenya. (4 marks)
7. Public health surveillance is the continuous systematic collection, analysis, and interpretation of health-related data for action. Differentiate between Active and Sentinel types of surveillance. (4 marks)
8. Epidemiological information is used to plan and evaluate strategies to prevent illness. State **FOUR** forums in which epidemiological reports can be disseminated. (4 marks)
9. During the planning process a researcher should decide on the appropriate method of data collection to be used. Mention **FOUR** methods of data collection. (4 marks)

10. Disease progression is the worsening and general progression of a disease over time. Outline **FOUR** stages of disease progression as implied in epidemiology.

(4 marks)

**SECTION B: (60 MARKS)**

**Answer any THREE questions in this section (Question 11 is compulsory)**

11. Below is an example of a study scenario, use it to answer the questions

In 2018, 89538 registered nurses in Kenya aged 34 to 59 years and with no past history of cancer, completed a previously validated dietary questionnaire designed to measure individual consumption of total fat, saturated fat, linoleic acid, and cholesterol, as well as other nutrients. The nurses were then classified into five groups of similar size according to their levels of fat intake, followed up in time, and the incidence of breast cancer in each of these groups was measured and compared (Willett et al., 2010).

- a. Identify the above study design. (2 marks)
- b. Identify the target population. (2 marks)
- c. Explain **EIGHT** demerits of the above study design. (16 marks)

12. The disease progression process begins with exposure to or accumulation of risk factors capable of causing disease in a susceptible host.

- a) Describe **FOUR** criteria used to identify notifiable diseases. (8marks)
- b) Explain **SIX** phases of disease progression according to the natural history of diseases. (12 marks)

13. An epidemiologist currently working in Coastal Counties has been authorized to conduct disease screening on the suspected cases of Coronavirus that is currently happening in the region.

- a) Explain **FIVE** factors to consider when planning for the disease screening exercise. (10 marks)
- b) Describe **FIVE** categories of biological agents that cause diseases.

(10 marks)

14. According to the WHO, community diagnosis is a quantitative and qualitative description of the health of citizens and factors influencing their health. It also identifies problems and stimulates action.

- a) Describe **FIVE** health needs you may encounter when conducting community diagnosis. (10 marks)
- b) Describe **FIVE** stages of conducting community diagnosis. (10 marks)

AMMU