



AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF PUBLIC HEALTH
DEPARTMENT OF COMMUNITY HEALTH
DIPLOMA IN COMMUNITY HEALTH
END OF SEMESTER EXAMINATION AUGUST 2026

UNIT CODE: DCHP 133: Epidemiology and Basic Demography

DATE: 4th August, 2026

TIME: Two Hours Start: 9AM Finish: 11AM

INSTRUCTIONS

1. This exam is marked out of 60 marks
2. This Examination comprises TWO Sections
Section A: Compulsory Question (20 marks)
Section B: Long Answer Questions (40 marks)

SECTION A: COMPULSORY (20 Marks)

Short Answer Questions

1. A Community Health Promoter is preparing health education materials to explain the importance of epidemiology in controlling communicable diseases within the community.

Define the following terms:

a) Epidemiology

(2 marks)

b) Disease surveillance

(2 marks)

2. A county health department is reviewing disease surveillance reports after an increase in malaria cases in several villages.

Differentiate between the following pairs of epidemiological measures:

a) Incidence and prevalence

(2 marks)

b) Mortality rate and morbidity rate

(2 marks)

3. Following the confirmation of a highly infectious disease, public health officers implemented several disease control measures to limit transmission.

Explain the following public health measures:

a) Isolation

(2 marks)

b) Quarantine

(2 marks)

4. During an epidemiology class, learners are discussing the interaction of factors responsible for disease occurrence. Identify and briefly describe the THREE components of the epidemiological triangle. (4 marks)

5. A Community Health Officer is developing interventions to reduce the burden of cervical cancer in a rural community. State FOUR levels or approaches of disease prevention, giving one example for each. (4 marks)

SECTION B

ANSWER ANY TWO (2) QUESTIONS (40 Marks)

6. A county hospital reports a sudden increase in patients presenting with acute watery diarrhoea after heavy rainfall. The County Public Health Team is tasked with investigating and controlling the outbreak.

i. Explain FIVE principles of epidemiology that should guide the investigation of the outbreak.

(10 Marks)

ii. Describe FIVE steps involved in conducting an outbreak investigation, explaining the importance of each step.

(10 Marks)

7. A Community Health Department is training newly recruited Community Health Promoters on disease occurrence and transmission in preparation for a surveillance programme.

i. Using the epidemiological triangle, explain the interaction between the agent, host, and environment in the occurrence of disease, giving relevant examples. (10 Marks)

ii. Discuss FIVE epidemiological concepts used in disease occurrence and distribution by explaining each of the following. (10 Marks)

8. Following increased cases of measles in a sub-county, the Ministry of Health has initiated surveillance, disease notification, and immunization campaigns to prevent further spread.

i. Discuss the THREE levels of disease prevention giving appropriate examples for each level.

(10 Marks)

ii. Explain FIVE methods used in disease surveillance and outbreak response, highlighting the contribution of each method to disease prevention and control.

(10 Marks)



END OF EXAMINATION