AMREF INTERNATIONAL UNIVERSITY

SCHOOL OF PUBLIC HEALTH

DEPARTMENT OF COMMUNITY HEALTH

BACHELOR OF SCIENCE IN COMMUNITY HEALTH

END OF SEPTEMBER-DECEMBER TRIMESTER 2022 EXAMINATIONS

CHP 214: Epidemiology

Date: 29th November 2022

Time: 2 hours **Start: 2.00 PM** **Stop: 4 PM**

INSTRUCTIONS

1. This exam is marked out of 70 marks
2. This Examination comprises TWO Sections
   Section A: Compulsory Question (30 Marks)
   Section B: Long Answer Questions (40 Marks)
3. All questions in Section A are compulsory and Answer any TWO questions in Section B
4. No movement is allowed during the examination
5. Any aspect of cheating detected during and or after the exam administration will lead to the nullification of your exam.
6. Do Not write anything on the question paper -use the back of your booklet for rough work if need be

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SECTION A: SHORT ANSWER QUESTIONS (30 Marks)

1. Define the following terms
    a. Disease (2 Marks)
    b. Susceptibility (2 Marks)
    c. Prevalence (2 Marks)
    d. Sporadic (2 Marks)
    e. Life expectancy (2 Marks)

2. Highlight three (3) levels of disease prevention (3 Marks)

3. Outline five objectives of Epidemiology (10 Marks)

4. a) Define Surveillance (2 Marks)

    b) Highlight five characteristics of a good surveillance system (5 Marks)

SECTION B: LONG ANSWER QUESTIONS: ANSWER ANY TWO QUESTIONS

a) Describe using examples the three characteristics of descriptive epidemiology (6 Marks)

b) Differentiate between cross-sectional study and prospective study designs (6 Marks)

c) Using an example, describe ecological studies (4 Marks)

d) Give two advantages and two disadvantages of ecological studies (4 Marks)

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5. The following data are a subset of the Framingham study results showing the number of cases of coronary heart disease (CHD) becoming clinically apparent six years after follow-up of a cohort of 1329 men in the 40 to 59 age group. The men are divided by their level of serum cholesterol (a suspected risk factor) at the start of the study: Use the table to answer the following questions.

Outcome	Cholesterol >= 220 mg%	Cholesterol <200 mg%
CHD	72	20
NOT CHD	684	553

a) Calculate the outcome rate exposed (2 Marks)
b) Calculate the outcome rate not exposed (2 Marks)
c) Calculate the relative risk (3 Marks)
d) Calculate risk difference (3 Marks)
e) Calculate the population exposed (3 Marks)
f) Calculate population attributable risk % (PAR%) (3 marks)
g) What does the PAR% say about this population? (4 Marks)

6. Using a diagram, describe the natural history of a disease (20 Marks)

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