



UNIVERSITY OF SWAZILAND
Faculty of Health Sciences

DIPLOMA IN ENVIRONMENTAL HEALTH

FINAL EXAMINATION PAPER 2007/2008

TITLE OF PAPER	:	INTRODUCTION TO EPIDEMIOLOGY
COURSE CODE	:	HSC 310
DURATION	:	2 HOURS
MARKS	:	100
INSTRUCTIONS	:	READ THE QUESTIONS & INSTRUCTIONS CAREFULLY
	:	ANSWER ANY FIVE (5) QUESTIONS
	:	EACH QUESTION CARRIES 25 MARKS.
	:	WRITE NEATLY & CLEARLY
	:	NO PAPER SHOULD BE BROUGHT INTO NOR OUT OF THE EXAMINATION ROOM.
	:	BEGIN EACH QUESTION ON A SEPARATE SHEET OF PAPER.

DO NOT OPEN THIS QUESTION PAPER UNTIL PERMISSION IS GRANTED BY THE INVIGILATOR.

QUESTION 1

- A. What is epidemiology?
- B. In the early 1980's, epidemiologists recognized that AIDS occurred most frequently in men who had sex with men and in intravenous drug users. Describe how this information might be used for each of the following:
 - a. Population or community health assessment
 - b. Individual decisions
 - c. Search for causes

QUESTION 2

Define the following epidemiological terms

- 1. Prevalence rate
- 2. incidence rate
- 3. Morbidity
- 4. Mortality rate
- 5. attack rate

QUESTION 3

Assume you are working in a country in which none of the conditions below is on the country list of reportable diseases. For each condition, what sources of data might be available if you wished to conduct surveillance? What factors make one source of data more appropriate than another?

- A. Bubonic plague
- B. Spinal cord injury
- C. Lung cancer in non-smokers

QUESTION 4

Mention and briefly describe the five facets or components in evaluating a surveillance system

QUESTION 5

For the month of August, 12 new cases of tuberculosis and 12 new cases of aseptic meningitis were reported to the health department.

- a. Would you call either group of cases a cluster and why?
- b. Would you call either group of cases an outbreak and why?
- c. What additional information might be helpful in answering these questions?

QUESTION 6

You are called to help investigate a cluster of 17 men who developed leukemia in a community. Some of them worked as electrical repair men, and others were radio operators. Which study design would you choose to investigate a possible association between exposure to electromagnetic fields and leukemia?

QUESTION 7

Briefly discuss the following surveillance systems

- a. Routine surveillance
- b. Sentinel surveillance
- c. Research
- d. Epidemic investigation