UNIVERSITY OF SWAZILAND

FACULTY OF HEALTH SCIENCES

(SECOND SEMESTER)

FINAL EXAMINATION PAPER
MAY, 2012

COURSE CODE: NUR 521

COURSE TITLE: COMMUNITY HEALTH NURSING IV

TIME ALLOWED: 2 HOURS

MARKS ALLOCATED: 75

INSTRUCTIONS:

1 THIS PAPER CONTAINS <u>FOUR</u> (4) QUESTIONS.

2 ANSWER A TOTAL OF <u>THREE (3)</u> QUESTIONS, EACH ON A SEPARATE SHEET OF PAPER.

3 SECTION ONE (1) IS <u>COMPULSORY</u>

4 IN SECTION TWO (2) <u>QUESTION 1 IS COMPULSORY</u>

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A: MULTIPLE CHOICE QUESTIONS

SELECT THE MOST APPROPRIATE ANSWER FOR EACH OF THE QUESTIONS ASKED. E G 1= Z

1 **Epidemiology is the study of disease/conditions distribution and determinants. As a science, it utilises rational study methods in identifying the distribution patterns and determinants of diseases. From the studies, recommendations are generated on how to:**

   a. Plan for disease prevention and control
   b. Predict the disease patterns for effective prevention and control
   c. Mobilise resources for effective prevention and control
   d. All of the above

2. **The definition of epidemiology includes the term" distribution". Which of the following best describes the term?**

   a. Frequency and determinants
   b. Determinants and applications
   c. Frequency and pattern
   d. Frequency and application

3 **Disease determinant factors include the:**

   a. agent,
   b. host
   c. environment
   d. vehicle
   e. **a , b, and c**

5 **A useful measure of lethality of an acute infectious disease is**

   a. Attack rate
   b. Incidence
   c. Case fatality rate
   d. Mortality rate

6. **The mortality rate from disease X in community A is 75/100,000 in persons aged 65 to 69 years old. The mortality rate from the same disease in city B is 150/100000 in persons aged 65 to 69 years old. The inference that disease X is two times more prevalent in persons aged 65 to 69 in City A is:**

   a. Correct
   b. Incorrect, because of failure to distinguish between prevalence and mortality
   c. Incorrect, because of failure to adjust for differences in age distributions
   d. Incorrect, because of failure to adjust for differences between period and point prevalence
   e. Incorrect, because a proportion is used when a rate is required to support an inference

7. **Virulence is indicated by:**

   a. Proportional mortality rate
   b. Specific mortality rate
   c. Case fatality rate
   d. Mortality rate

8. **Descriptive epidemiology is the study in relation to:**

   a. Time
   b. Place
   c. Person
   d. All of the above

9. **Study of a person who has already contacted the disease is called:**

   a. Case control
   b. Cohort
   c. Control cohort
   d. Longitudinal

10. **Public health surveillance includes all of the following EXCEPT:**

   a. Collection of health data
   b. Analysis of health data
   c. Interpretation of health data
   d. Dissemination of health data
   e. All of the above are part of public health surveillance

11. Selected epidemiologic factors often contribute to the outbreak of a disease EXCEPT
   :

   a. Host
   b. Agent
   c. Time
   d. Environment
   e. All of the above factors contribute to an outbreak

12. A large, unexpected number of salmonella poisoning traced to chicken cooked and held at an improper temperature and served at party supper is an example of which of the following?

   a. Point source epidemic
   b. Continuous source epidemic
   c. Propagated epidemic
   d. Mixed epidemic

13. What is another name that is frequently used instead of the word "epidemic" when the cases are confined to a more limited geographic area?

   a. Pandemic
   b. Endemic
   c. Outbreak
   d. Mixed epidemic

14. Which of the following best defines a healthy carrier?

   a. An individual who harbours a pathogen and is infectious, although recovering
   b. An individual who harbours a pathogen and is infectious, but recovered
   c. An individual who harbours a pathogen and is infectious, but has not become ill or manifested any symptoms of the disease

15. An analytic epidemiology study involves which of the following?

   a. Frequency of disease according to person, place, and time
   b. Use of a comparison group
   c. A description of the clinical characteristics of a disease
   d. Epidemic curve

16. True about prevalence are all, except

a. Rate
b. Specificity for all old and new cases
c. Pandemic
d. Prevalence of two types

17. All are true about a case control studies except

a. Relative risk can be calculated
b. Less expensive
c. Suitable for rare diseases
d. Backward study

18. Which of the following is a case-control study?

a. Study of past mortality or morbidity trends to permit estimates of the occurrence of disease in the future.

b. Analysis of previous research in different places under different circumstance to permit the establishment of hypothesis based on cumulative known factors

c. Obtaining histories and other information from a group of known cases

   and from a comparison group to determine the relative frequency of a characteristic or exposure under study

d. Study of the incidence of cancer in men who have quit smoking

e. Both a and c

19. The process of "matching" allows:

a. The matched variables to be evaluated
b. For selecting the case and control group with the same known confounding variables
c. Matching of factors in doubt
d. To avoid focusing on variables desired

20. **Which of the following is an advantage of active surveillance**

a. Requires less project staff

b. Is relatively inexpensive

c. More accurate due to reduced reporting burden for health care providers

d. relies on different disease definitions to account for all cases

e. reporting system can be developed quickly

B. SHORT ANSWER QUESTIONS

i)   **How does epidemiology help us establish goals and objectives?.....[3]**

ii)   **How might knowledge gained through be useful in carrying out a public/community health programme?...[2]**

TOTAL MARKS...[25]

SECTION TWO

QUESTION 1(COMPULSORY)

A. Outbreak investigations are a type of fast-paced epidemiologic research, undertaken to determine the cause of the outbreak and what remedial actions are required. **Describe in detail the steps and remedial actions involved in epidemic investigation.**

TOTAL MARKS...[25]

QUESTION 2

A   Disease determinant factors include the agent, host and environment. Describe each of these determinants and provide appropriate examples.......................[3]

B Each and every communicable disease has its own unique source, route of transmission and susceptible host. Identify the principles of control and prevention and provide an appropriate example...[6]

C To understand the transmission process of communicable diseases it Is of paramount importance to understand the Natural history of a disease. Explain what the natural history of disease is..[4]

D. Identify and describe the stages of disease development................................[12]

TOTAL MARKS...[25]

QUESTION 3

A   The following terms are characteristics of infectious agents. You are
     required to match each statement with the term that it best
     describes...[10]

E.g   1= z

Statement	Concept
1. The ability of the agent to cause disease	A. Toxigenecity
2. A term used to describe the severity of the health problem caused by the agent	B Virulence
3. Refers to the its ability to produce toxins that are harmful to the human body	C Pathogenecity
4. Refers to the ability of infectious agents to survive in adverse conditions, including exposure to antibiotics	D Infectivity
5. The ability of the agent to cause immunity and is the basis for immunization practices	E Resistance F Antigenecity
6. The primary cause of a health related condition	G Host
7 The client system affected by a particular condition under Investigation	H Agent I Environment
8 Both exposure and disease outcome re determined simultaneously	J. Passive surveillance
9. The presumptive identification of unrecognized disease or defect by the application of tests, examinations, or other procedures that can be applied rapidly and inexpensively	K Sensitivity L cohort study
10 The investigator selects a group of exposed individuals and a group of non exposed individuals and follows up both groups to compare the incidence of the disease	M. Cross-sectional

B. Classify each of the following as an epidemic, endemic, pandemic or outbreak...[3]

I. Annually, there are approximately 350-500 million cases of malaria, killing between one and three million people, the majority of whom are young children in sub-saharan Africa]

II. An annual cluster of eight breast cancer and eight other malignant tumour cases developed in a period of 12 years among 98 nurses exposed to ethylene oxide for 5-15 years in a unit using sterilizer in a hospital]

III. During a regular surveillance of health facilities, one region reported that a case of cholera was identified on the morning of the surveillance.

C) Three important aspects of person-to-person spread of disease are generation time, herd immunity, and secondary attacks. Briefly describe each of the aspects named above including their impact.............................[12]

(i). Generation time...(3)
(ii). Herd immunity..(3)
(3). Secondary attacks...(3)

TOTAL MARKS..[25]