



AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF MEDICAL SCIENCES
DEPARTMENT OF NURSING AND MIDWIFERY SCIENCES
BACHELOR OF SCIENCE IN NURSING (BSN)
September-December 2024 Trimester Main Examination

COURSE CODE AND TITLE: BSM 314: Epidemiology & Demography

DATE:

TIME: 2 HOURS

START: 9:00AM

END: 11:00AM

Instructions

- 1) This exam is out of 70
- 2) This paper has three sections: Section I: Multiple choice Questions (MCQ) (20 marks), Section II: Short answer questions (SAQ) (30 marks) and Section III: Long answer question (LAQ) (20marks)
- 3) Answer **ALL** questions in Section I and Section II and III
- 4) Answer all the questions in the examination booklets provided
- 5) Any rough work to be done at the back of the answer booklet

SECTION I: MULTIPLE CHOICE QUESTIONS ---20 MARKS

1. The main focus of epidemiology is;-
 - A. Diagnosis of diseases
 - B. Distribution and determinants of health-related states
 - C. Health promotion in hospitals
 - D. Individual health records
2. A disease that is endemic in most of the children in a population, with the adults in the same population being less often affected is referred to as
 - A. Sporadic
 - B. Endemic
 - C. Hyperendemic
 - D. Holoendemic
3. A systematic method for continuous monitoring of diseases in a population, in order to be able to detect changes in disease patterns and then to control them is
 - A. Conditional probability
 - B. Screening
 - C. Prevalence
 - D. Surveillance
4. Pregnant women are highly affected by malaria. This implies
 - A. Distribution by person
 - B. Distribution by place
 - C. Distribution by time
 - D. Aetiology of disease
5. In which one of the following circumstances will the prevalence of a disease in the population increase, all else being constant
 - A. If the incidence rate of the disease falls
 - B. If survival time with the disease increases
 - C. If recovery of the disease is faster
 - D. If the population in which the disease is measured
6. The term "natural history of disease" refers to:
 - A. The progression of a disease without medical intervention
 - B. The genetic origins of disease
 - C. The social impact of a disease
 - D. The discovery of a disease
7. In an epidemiological context, what is the population at risk?
 - A. The proportion of a population that engages in risky behaviour
 - B. The group of people that may experience the outcome we want to study
 - C. A group of people participating in a study that is risky for them.
 - D. A population group with the highest relative risk of a disease
8. Prevalence of disease in a community can be found out by
 - A. Case control study
 - B. Cohort study
 - C. Cross-sectional study
 - D. Experimental study
9. Number of births divided by the total population (includes men, women and children) per 1000 is referred to as
 - A. Crude birth rate
 - B. General fertility rate
 - C. Age-specific fertility rates
 - D. Total period fertility rate
10. What is a technique used in clinical study design to control for measurable confounding variables

- A. Cohort
 - B. Matching
 - C. Cross-section
 - D. Randomization
11. Prevalence of a disease in a population is:
- A. A measure of all cases, old and new, at a given time
 - B. The rate of new cases over time
 - C. The rate of recovery from a disease
 - D. The risk of infection among healthcare workers
12. Which model explains that diseases are caused by multiple factors interacting?
- A. Single-cause model
 - B. Multicausal model
 - C. Biomedical model
 - D. Germ theory model
13. In epidemiology, the "host" refers to:
- A. The environment in which a disease occurs
 - B. The organism affected by the disease
 - C. The causative agent of the disease
 - D. The healthcare provider
14. The most important purpose of health statistics is to:
- A. Monitor individual patient records
 - B. Track population health trends
 - C. Record healthcare expenses
 - D. Provide training data for healthcare providers
15. Demography primarily studies:
- A. Clinical interventions
 - B. Populations and their characteristics
 - C. Individual patient histories
 - D. Genetic inheritance
16. Which of the following is NOT a demographic measure?
- A. Birth rate
 - B. Fertility rate
 - C. Blood pressure
 - D. Migration rate
17. Birth rate in a population is defined as the:
- A. Total number of births per year
 - B. Number of live births per 1,000 people per year
 - C. Number of pregnancies in a year
 - D. Rate of infant deaths per 1,000 births
18. Which of the following is not the analytical study?
- A. Cross sectional comparative study
 - B. Prevalence study
 - C. Cohort study
 - D. Case control study
19. Mortality rate is a measure of:
- A. Births in a population
 - B. Deaths in a population
 - C. Migration patterns
 - D. Births compared to deaths
20. Population pyramids provide information on:

- A. Population age and sex structure
- B. Mortality rates only
- C. Economic status of a population
- D. Migration trends only

SECTION 11. SHORT ANSWER QUESTIONS

(20 MARKS)

1. Discuss briefly the contributions of these two figures to the field of Epidemiology:
 - i. John Snow (3marks)
 - ii. Edward Jenner (3marks)
2. Define demography (1 mk)
3. Name and describe three sources of demographic data (6 marks)
4. Name the three components of the epidemiological triad. (3 marks)
5. State 4 ways in which a midwife in epidemiology measures the disease in a population (4 marks)

SECTION 11I: LONG ESSAY QUESTIONS

(20 MARKS).

1. Discuss how epidemiological methods can be used to reduce maternal mortality in low resource setting (10 marks)
2. Analyze the role of epidemiology in midwifery practice, focusing on maternal and infant health outcomes (10 marks)