



AMREF INTERNATIONAL UNIVERSITY  
SCHOOL OF MEDICAL SCIENCES  
DEPARTMENT OF NURSING AND MIDWIFERY SCIENCES  
KENYA REGISTERED COMMUNITY HEALTH NURSING  
End Semester April 2025 Examinations

COURSE CODE AND TITLE: DNS 223: Epidemiology, Demography And  
Communicable Diseases

DATE:15-4-2025

TIME: 2 HOURS      Start: 0900 HOURS      Finish: 1100 HOURS

INSTRUCTIONS

1. This exam will be marked out of 70 Marks
2. ALL Questions are compulsory.
3. The Examination has Three Sections: Section I- Multiple Choice Questions, Section II: Short Answer Questions, Section III: Long Essay Questions
4. Answer all Questions in the ANSWER BOOKLET provided
5. Do not write anything on the question paper
6. Use the back of your booklet for rough work if need be.

SECTION 1: MULTIPLE CHOICE QUESTIONS (20 MARKS)

1. In the definition of epidemiology, "determinants" include:-
  - a) Agents
  - b) Causes
  - c) Control measures
  - d) Risk factors
2. The risk of getting the disease during a specified period is referred to as the:-
  - a) Incidence rate
  - b) Point Prevalence
  - c) Attack rate
  - d) Period Prevalence
3. A pap smear for early detection of cervical cancer and papilloma virus constitutes:-
  - a) Primary prevention.
  - b) Secondary prevention
  - c) Tertiary prevention
  - d) Primordial prevention
4. The measure used to describe the frequency of new cases of a disease in a population is:-
  - a) Prevalence
  - b) Incidence
  - c) Morbidity
  - d) Mortality
5. The purpose of surveillance in epidemiology is:-
  - a) To diagnose individual cases
  - b) To monitor and control disease spread
  - c) To provide treatment to patients
  - d) To identify risk factor
6. The incubation period is the time between:-
  - a) Exposure to the agent and the onset of symptoms
  - b) Diagnosis and recovery
  - c) Exposure to the agent and diagnosis
  - d) Onset of symptoms and recover
7. Father of demography is:-
  - a) John Grant
  - b) John Snow
  - c) Breson Galey
  - d) Haley Brant

8. The following is a measure of association between exposure and disease:-
- Relative risk
  - Prevalence
  - Incidence
  - Mortality rate
9. Total fertility rate (TFR) refers to:-
- Number of births per one thousands woman
  - Number of women between 15-49 years
  - Number of children per women approximate completed family size
  - Number of children born to women of reproductive age in a given period
10. One of the single most important causes of lower fertility is:-
- Higher levels of economic development.
  - Increasing the availability of legal abortion.
  - The availability of grandparents to help with child care.
  - Raising the status of women
11. The type of poliovirus responsible for the majority of paralytic cases is: -
- Type 1
  - Type 2
  - Type 3
  - Type 4
12. The following is the initial phase of clinical progression in poliomyelitis:-
- Asymptomatic infection
  - Paralytic phase
  - Non-paralytic phase
  - Recovery phase
13. The following is a fungal infection that affects the pigmentation of the skin, causing light or dark patches:-
- Tinea corporis
  - Tinea capitis
  - Tinea pedis
  - Tinea versicolor
14. The classical rash progression pattern in measles is: -

- A. Starts on the feet and spreads upwards towards the head
  - B. Starts on the face and spreads outwards
  - C. Only appears on the trunk
  - D. Appears only on the arms and legs
15. Areas of the body MOST commonly affected by scabies in adults include:-
- A. Face and scalp
  - B. Soles of the feet
  - C. Chest and back
  - D. Wrists of the hands
16. A vector-borne disease that is transmitted by the *Aedes aegypti* mosquito in urban areas is: -
- A) Malaria
  - B) Yellow fever
  - C) Trypanosomiasis
  - D) Onchocerciasis
17. The primary prevention method for the transmission of schistosomiasis include: -
- A) Using insecticide-treated nets
  - B) Avoiding contact with infested water
  - C) Vaccination
  - D) Chemoprophylaxis
18. The intervention necessary when managing a rabies patient in a clinical setting include:-
- A) Administer high doses of antibiotics
  - B) Avoid bright light, noise, and draughts
  - C) Restrict all food intake
  - D) Apply cold packs to the head
19. The *Brucella* species considered to be the MOST virulent is: -
- A) *Brucella abortus*
  - B) *Brucella melitensis*
  - C) *Brucella suis*
  - D) *Brucella canis*

20. A key complication of Enteric Fever is: -

- A. Intestinal perforation
- B. Liver abscess
- C. Pulmonary edema
- D. Brain abscess

SECTION II: SHORT ANSWER QUESTIONS (30 MARKS)

1. Explain the natural history of diseases (4 marks).
2. State six (6) determinants of disease (6 marks).
3. State five (5) methods of obtaining demographic data (5 marks).
4. As the county public health nurse, outline five (5) factors that can reduce the prevalence of TB in the county of Nairobi.
5. Explain five (5) prevention and control measures of leprosy (5 marks)
6. Using a well labelled diagram, illustrate the transmission onchocerciasis (5 Marks)

SECTION III: LONG ANSWER QUESTION (20 MARKS)

1. A 50-year-old male reports to the health facility following several bouts of diarrhoea at home. A diagnosis of *Entamoeba histolytica* is made.
  - a) Briefly describe the pathophysiology of amoebiasis (5 Marks)
  - b) Using a well labelled diagram, illustrate the transmission cycle of *Entamoeba histolytica* (5 Marks)
  - c) Explain Five (5) specific prevention and control measures against amoebiasis (10 Marks)