



AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF MEDICAL SCIENCES
DEPARTMENT OF NURSING AND MIDWIFERY SCIENCES
KENYA REGISTERED COMMUNITY HEALTH NURSING
Supplementary/ Special Examination December 2024

COURSE CODE AND TITLE: DNS223: Epidemiology, Demography and Communicable Diseases

DATE: TUESDAY 10TH DECEMBER 2024

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 -use the back of your booklet for rough work if need be**

SECTION I: MULTIPLE CHOICE QUESTIONS (20 MARKS)

1. A disease is:
 - a) A definable physiological or psychological dysfunction
 - b) What the patient experiences
 - c) The state of dysfunction of the social role of the person
 - d) None of the above
2. A disease that occurs rarely and without regularity is said to be:
 - a) Sporadic
 - b) Endemic
 - c) Epidemic
 - d) Pandemic
3. This stage of prevention is intended to reduce complications and disabilities.
 - a) Primary prevention
 - b) Secondary prevention
 - c) Tertiary prevention
 - d) All of the above
4. The "natural history of disease" refers to:
 - a) The progress of a disease in an individual over time
 - b) The period between exposure and first symptoms
 - c) The period from first symptoms to recovery, disability, or death
 - d) The broad scope of manifestations of a disease in different individuals
5. Hosts that harbor a specific infectious agent while manifesting no discernable signs or symptoms are called:
 - a) Portals
 - b) Vectors
 - c) Vehicles
 - d) Carriers
6. Sporozoites of the malarial parasites are found in
 - a) The saliva of female Anopheles mosquito, which is freshly moulted
 - b) The saliva of infected female Anopheles mosquito
 - c) RBCs of an infected human
 - d) The spleen of an infected human
7. Yellow fever is transmitted by
 - a) Anopheles
 - b) Aedes
 - c) Housefly
 - d) Tse-tse fly

8. *Giardia lamblia*
- Is usually acquired by ingestion of food or water contaminated by the trophozoites
 - Trophozoites have four flagella
 - Can effectively be treated by mepacrine
 - Cysts are killed by standard chlorination of water
9. Tse-tse fly is a vector for sleeping sickness. Which of the following parasite transmits the infective stage?
- Wuchereria bancrofti*
 - Leishmania donovani*
 - Plasmodium falciparum*
 - Trypanosoma gambiense*
10. An effective step to stop spread infection during an epidemic of polio
- Chlorination of water
 - Isolation of cases
 - Administration of OPV to all children
 - Administration of IPV to all children
11. Diseases with animal reservoirs are:
- Outbreaks
 - Portals
 - Nosocomial infections
 - Zoonoses
12. Polio can be eradicated by which of the following?
- Attention to sewage control and hygiene
 - Killed polio vaccine
 - Live polio vaccine
 - Combination of the killed and live vaccines.
13. What makes TB hard to diagnose?
- Symptoms aren't always obvious.
 - Symptoms come and go.
 - The disease may take years to become active.
 - A and B.
14. The main virulence factor in TB pathogenesis is:
- Bacteria's ability to survive inside the bronchi.
 - Bacteria's ability to destroy the macrophage.
 - Bacteria's ability to destroy the pulmonary tissue.
 - Bacteria's ability to survive inside the macrophage.

15. Tetanus is caused by which type of pathogen?
- a) Bacteria
 - b) Viruses
 - c) Fungi
 - d) Protozoa
16. Which one of the following is the best method to make a definitive diagnosis of scabies?
- a) Identification of burrows on skin examination.
 - b) Identification of mites using a magnifying glass on skin examination.
 - c) Performing a skin scraping from a burrow and identifying mites, eggs, or feces under the microscope.
 - d) Performing a culture of a skin scraping from a burrow and isolating *Sarcoptes scabiei* in a culture specimen.
17. What is the most common way *Brucella* is transmitted to humans?
- a) Ingestion of contaminated food or water.
 - b) Inhalation of contaminated air.
 - c) Direct contact with infected animals.
 - d) All of the above.
18. Which of the following is a common way to prevent *Brucella* infection in humans?
- a) Avoiding contact with infected animals.
 - b) Properly cooking and handling animal products.
 - c) Vaccination.
 - d) All of the above.
19. How do people get infected with *Shigella*?
- a) By consuming water or food contaminated with fecal matter.
 - b) From a bite from an infected insect.
 - c) From stepping on a rusty nail contaminated with shigellosis.
 - d) From a bite from an infected primate.
20. Ticks are responsible for transmitting
- a) Yellow fever
 - b) Dengue
 - c) Lyme disease
 - d) Chagas' disease

SECTION II: SHORT ANSWER QUESTIONS (30 MARKS)

1. Explain five (5) importance of surveillance in epidemiology (5 marks).
2. Explain the chain of infection (5 marks).
3. Describe the life cycle of schistosomiasis (5 marks).
4. Explain the two (2) classification of leprosy (4 marks).
5. Explain the pathophysiology of cholera(5 marks)
6. State the three(3) forms of Leishmaniasis(3 marks)

SECTION III: LONG ANSWER QUESTIONS (20 MARKS)

1. Malaria is a life-threatening disease spread to humans by some types of mosquitoes. It is mostly found in tropical countries. It is preventable and curable.
 - a) State the four (4) types of human malaria parasites (4 marks).
 - b) Explain the three (3) types of malaria tests. (3 marks).
 - c) Describe the life cycle of malaria (5 marks).
 - d) Explain the four (4) main preventive and control measures of malaria (8 marks).