



**NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

**Faculty of Health, Natural
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| QUALIFICATIONS: BACHELOR OF ENVIRONMENTAL HEALTH SCIENCES, BACHELOR OF SCIENCE IN HEALTH INFORMATION SYSTEMS MANAGEMENT, BACHELOR OF HUMAN NUTRITION | |
| QUALIFICATION CODE: 08BOHS, 07BHIS, 08BOHN | LEVEL: 6 |
| COURSE NAME: EPIDEMIOLOGY 2B | COURSE CODE: EPD 612S |
| DATE: NOVEMBER 2024 | SESSION: 1 |
| DURATION: 3 hours | MARKS: 100 |

FIRST OPPORTUNITY EXAMINATION QUESTION PAPER

EXAMINER(S): DR LARAI AKU-AKAI

MODERATOR: DR ROSWITHA MAHALIE

INSTRUCTIONS:

1. Answer ALL the questions.
2. Write clearly and neatly in the answer booklet.

PERMISSIBLE MATERIALS:

1. Non-programmable calculator

ATTACHEMENTS

1. None

THIS QUESTION PAPER CONSISTS OF 5 PAGES (Excluding this front page)

SECTION A

Question 1

(15 marks)

Select the most appropriate answer from the options provided. (Each correct answer earns 1 mark)

- 1.1 Which of the following factors play a key role in likelihood of infectious disease acquisition?
a. Genetic profile
b. Human behaviour
c. Environmental conditions
d. All of the above (1)
- 1.2 Diseases which can be transmitted by skin penetration include all the following **except**:
a. Amoebic dysentery
b. Hookworm
c. Tetanus
d. Hepatitis B (1)
- 1.3 The following are modes of transmission which are appropriate for the communicable diseases **except**:
a. Faeco-oral - Hepatitis B
b. Fomite borne - Chickenpox
c. Direct - HIV
d. Droplet inhalation - Tuberculosis (1)
- 1.4 The following infectious conditions have been found to cause malnutrition in children younger than 5 years **except**:
a. Measles
b. Chronic diarrhoea
c. Chronic lower respiratory infections
d. Late weaning (1)
- 1.5 The following diseases are vaccine preventable **except**:
a. Diphtheria
b. Ascariasis
c. Whooping cough
d. Tuberculosis (1)

- 1.6 A physician working in an emergency room, has just examined a person with watery diarrhoea. The physician suspects the man might have cholera. The following actions must be taken **except**:
- a. Commence rehydration of the patient
 - b. Isolation of the patient
 - c. Admit the patient in the general ward of the local hospital
 - d. Notification of WHO
- (1)
- 1.7 What parasitic worm can cause lung damage and severe malnutrition?
- a. Ringworm
 - b. Giardia
 - c. Ascaris
 - d. Staphylococcus
- (1)
- 1.8 A reduction in which of the following factors will reduce the rate of spread of an epidemic?
- a. Alter transmission by targeting those with latent disease
 - b. Increase contact with reservoir
 - c. Reduce duration of infectiousness
 - d. Alteration of diet
- (1)
- 1.9 A nosocomial infection comes from:
- a. Insects
 - b. Rodents
 - c. Tropical regions
 - d. Medical facilities
- (1)
- 1.10 As an epidemic spreads in a closed population, the number of susceptibles will:
- a. Increase
 - b. Decrease
 - c. Stabilize
 - d. None
- (1)
- 1.11 Why are scientists debating if viruses are living organisms?
- a. They are so small.
 - b. They are metabolically inert.
 - c. They live inside a host.
 - d. They don't always have DNA.
- (1)

- 1.12 The following communicable conditions can be responsible for non-communicable diseases in the long-term **except**:
- a. Schistosomiasis
 - b. Genital warts
 - c. Hepatitis A
 - d. HIV
- (1)
- 1.13 Louse causes all the following **except**:
- a. Epidemic typhus
 - b. Endemic typhus
 - c. Relapsing fever
 - d. Skin irritation and a nuisance
- (1)
- 1.14 Prodromal period is best described as:
- a. The gradual recovery of health and strength after illness
 - b. Patient is actually manifesting the first signs and symptoms of the disease
 - c. First exposure to disease
 - d. Premonition of an impending attack of a disease
- (1)
- 1.15 What do the following diseases have in common: tuberculosis, hepatitis A, leprosy, typhoid fever?
- a. All are caused by bacteria.
 - b. All thrive in urban areas.
 - c. They are all associated with low socio-economic and poor hygienic conditions
 - d. They are rural parasitic diseases
- (1)

Question 2

(20 marks)

- 2.1 Define the following terms:
- 2.1.1 Infection (2)
 - 2.1.2 Zoonosis (2)
 - 2.1.3 Reservoir (2)
 - 2.1.4 Surveillance (2)
 - 2.1.5 Quarantine (2)

- 2.2 For the diseases listed below indicate their agent and the route of transmission.
(Write your answer in the answer booklet) (10)

| | Disease | Agent (1 mark each) | Route of transmission (1 mark each) |
|--------|---------------|---------------------|-------------------------------------|
| 2.2.1. | Taeniasis | | |
| 2.2.2. | Mumps | | |
| 2.2.3. | Syphilis | | |
| 2.2.4. | Trachoma | | |
| 2.2.5. | Leptospirosis | | |

SECTION B

Question 3 (15 marks)

- 3.1 There is a measles epidemic currently taking place. How would you advise members of the public to prevent the disease? (4)
- 3.2 A food establishment has 16 workers. One day, one of the workers develops mild fever and jaundice. What is the possible disease in this worker? What is the mode of transmission of this disease? What are the preventive methods that should be put in place to prevent spread of this infection to the other workers and patrons of the food establishment? (6)
- 3.3 If you are informed as a Public Health Practitioner that there is a cholera outbreak in one village within your practice area, describe what you would do to manage the situation and prevent future recurrence of the event? (5)

Question 4 (25 marks)

- 4.1 An 18 month old baby develops a fever and severe cough and flu-like illness. The mother also notices that his eyes are red.
- 4.1.1. Describe the characteristic symptom you would expect to see that would conclude the diagnosis of the condition. (2)
- 4.1.2. Name the condition. (1)
- 4.1.3. Elaborate on three (3) possible complications of this condition. (3)
- 4.2 A remote village with no access to health services and very poor sanitation have occasionally observed children developing crippling muscles weakness they had attributed to witchcraft.
- 4.2.1.is the most likely condition. (1)
- 4.2.2. The most effective means of preventing this disease is by (1)
- 4.2.3. The village members must be informed to report any case of to a health worker. (1)

- 4.2.4. Mention two (2) other things that can be done to prevent occurrence of this disease. (2)
- 4.3 A woman from a rural community having no health centre gives birth on her own at home attended to by her older sister. After the birth, the infant's umbilical cord is cut with an old razor blade and dressed with a herbal concoction given to the family by a local traditional healer. Soon after, the baby becomes ill.
- 4.3.1 What disease is the baby at risk of having? (1)
- 4.3.2 Mention three (3) clinical features you expect the baby would have due to this condition. (3)
- 4.3.3 Explain the strategies in place to prevent occurrence of this disease. (2)
- 4.4. A certain rural community derive their water from a pond and snails are found breeding around the pond. The health worker in the clinic has received several complaints of bloody urine from members of the community and they have begun to suspect that the water must contain some deadly chemical causing the bloody urine.
- 4.4.1 Give your view on the drinking water quality being responsible for the prevalence of bloody urine in this case. (3)
- 4.4.2 What disease agent do you think is responsible for this disease? (1)
- 4.4.3 How could this be prevented? (3)
- 4.4.4 What is the most dreaded complication of this disorder? (1)

SECTION C

Question 5

(25 marks)

- 5.1 Discuss hospital acquired infections and outline important issues to be considered in an infection control plan for a hospital. (8)
- 5.2 Some communicable diseases are acquired from occupational settings. Select a profession that predisposes to certain diseases and mention four (4) diseases that can be acquired from that setting. Mention four (4) measures that can be used in that setting to prevent occurrence of these diseases. (8)
- 5.3 Elaborate on the Epidemiology of **EITHER** Malaria **OR** Hepatitis B. (9)

Good Luck!!!