



PAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY

FACULTY OF HEALTH AND APPLIED SCIENCES
DEPARTMENT OF HEALTH SCIENCES

QUALIFICATION: BACHELOR OF ENVIRONMENTAL HEALTH SCIENCES, BACHELOR OF HUMAN NUTRITION & BACHELOR OF SCIENCE IN HEALTH INFORMATION SYSTEMS MANAGEMENT	
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DURATION: 3 HOURS	MARKS: 100

FIRST OPPORTUNITY EXAMINATION QUESTION PAPER	
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INSTRUCTIONS
<ol style="list-style-type: none">1. Answer ALL the questions.2. Write clearly and neatly.3. Number the answers clearly.

PERMISSIBLE MATERIALS

NONE

THIS PAPER CONSISTS OF 7 PAGES (INCLUDING THIS FRONT PAGE)

SECTION A (35)

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 the likelihood of infectious disease acquisition?
- A. Genetic profile
 - B. Susceptibility
 - C. Environmental factors
 - D. All of the above
- 1.2 A reservoir of an infectious agent can be any of the following **except**:
- A. An asymptomatic human
 - B. A vaccine
 - C. An animal
 - D. The environment
- 1.3 Which of the following individuals would be least at risk for contracting a communicable disease?
- A. A young man with multiple sexual partners and uses no form of barrier protection.
 - B. A fully immunized child.
 - C. A cleaner working in a TB ward.
 - D. A patient undergoing chemotherapy
- 1.4 All of the following Faecal-Oral diseases are caused by protozoal infection **except**:
- A. Amoebiasis
 - B. Giardiasis
 - C. Cholera
 - D. Cryptosporidiosis
- 1.5 Diseases which can be transmitted by skin penetration include all of the following **except**:
- A. Hookworm
 - B. Amoebic dysentery
 - C. Tetanus
 - D. None of the above

- 1.6 ----- can cause lung disease and severe malnutrition in human.
- A. Ascaris
 - B. Giardia
 - C. Ringworm
 - D. Plague
- 1.7 The following organisms play a lesser role in human hookworm infestation **except**:
- A. *Ancylostoma braziliense*,
 - B. *Nector americanus* and *Ancylostoma duodenale*
 - C. *Ancylostoma ceylonicum*,
 - D. *Ancylostoma caninum*
- 1.8 Indirect transmission includes which of the following
- A. Droplet spread
 - B. Mosquito-borne
 - C. Foodborne
 - D. Doorknobs or toilet seats
- 1.9 Chicken pox is a highly infectious disease. The typical incubation period is between 10 to 20 days. A boy started school 2 weeks after showing symptoms of chicken pox which included mild fever, skin rash, and fluid-filled blisters. One month after the boy returned to school, none of his classmates had been infected by chicken pox. The main reason was?
- A. Herd immunity
 - B. All had been immunized prior to the school year
 - C. Contact was after infectious period
 - D. Subclinical infections were not yet detected
- 1.10 A Cholera outbreak is reported in Havana settlement in Windhoek. The *Vibro Cholerae* sero-group most likely responsible for the outbreak is;
- A. 01 or 0139
 - B. 19 only
 - C. 0139 only
 - D. 019 or 0139
- 1.11 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. All are associated with low socio-economic and poor hygienic conditions
 - D. They are rural parasitic diseases

- 1.12 Treatment of acute diarrhoea includes:
- A. Oral rehydration, zinc supplementation
 - B. Oral rehydration and penicillin
 - C. Intravenous saline and penicillin
 - D. Oral rehydration, energy-rich food, and zinc supplementation
- 1.13 Which pair of diseases are caused by viral agents?
- A. AIDS, Syphilis
 - B. Rabies, Mumps
 - C. Typhoid, Tetanus
 - D. Cholera, Tuberculosis
- 1.14 Paralytic poliomyelitis may be suspected in non-immunized children or young adults who have asymmetric flaccid limb paralysis or bulbar palsies without sensory loss during an acute febrile illness. However, certain disorders may produce similar findings. Which of the following can serve as a differential diagnosis based on clinical criteria and test results at the initial evaluation?
- A. Coxsackievirus infections
 - B. West Nile virus infection
 - C. Echovirus infections
 - D. Guillian-Barre syndrome
- 1.15 Which of the following is a commonly causes of highly communicable dermatophyte infection of the body?
- A. Taenia capitis
 - B. Taenia corporis
 - C. Taenia hair follicle
 - D. None of the above

QUESTION 2

(20 MARKS)

- 2.1. Define the following epidemiological terms and concepts:
- 2.1.1. Food-borne diseases. (2)
 - 2.1.2. One health concept. (2)
 - 2.1.3. Communicable disease. (2)
- 2.2. Differentiate between vector-borne transmission and vehicle-borne transmission, giving appropriate examples. (4)

- 2.3. 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)
2.3.1.	Yellow fever		
2.3.2.	Ascariasis		
2.3.3.	Syphilis		
2.3.4.	Trachoma		
2.3.5.	Hepatitis B		

SECTION B (37)

QUESTION 3

(22 MARKS)

- 3.1 A 33 years old pregnant woman living in Mariental begins to complain of recurrent fever with chills, malaise, headache, body pains, joint pains, nausea and vomiting, and she is found to have anaemia. She recently returned from a two weeks' vacation to Rundu. She was not regular with her antenatal visits and did not receive any chemoprophylaxis and vaccination for any disease. She is however confirmed to be HIV negative.
- 3.1.1 What is the woman's most likely diagnosis? (1)
- 3.1.2 Identify the name of the agent for the disease and explain how is it transmitted? (2)
- 3.1.3 Specify any two (2) strategies targeting pregnant women that would have prevented the occurrence of this disease in this woman? (2)
- 3.1.4 Mention other measures that can be used to prevent transmission of this disease. (3)
- 3.2 You are heading a communicable disease control programme in Gobabis health district. Recently, the town has been experiencing an increase in cases of faecal-oral transmitted diseases. Of importance has been cholera. Cholera is only one of many faecal-oral diseases, but its global importance is underlined by its inclusion in the WHO communicable disease surveillance. Analysis of data shows that more than 90% of reported cases are from the informal settlements.
- 3.2.1 Recall the causative agent of this disease and explain how the disease is transmitted. (2)
- 3.2.2 Briefly explain the clinical manifestation of cholera. (3)

3.2.3 Elaborate on the factors conducive for the transmission of cholera in this community. (4)

3.2.4 Discuss measures you would undertake to prevent and control the spread of this disease. (5)

QUESTION 4

(15 MARKS)

4.1 You are community health promotion officer in a rural community. A mother expresses her concerns about the strange illness that her 14 year old son is presenting. She describes his symptoms as having a fever, mild nausea and vomiting, headaches as well as the bilateral swelling and tenderness of his neck and cheeks.

4.1.1 What do you suspect to be the condition that this adolescent is presenting with? (1)

4.1.2 Recall the causative agent of this disease and state its mode of transmission. (2)

4.1.3 Enumerate possible other manifestations and complications this adolescent may present with. (3)

4.1.4 Briefly discuss how this disease can be controlled and prevented among the general public. (4)

4.2 Your sister is 2 months pregnant and she tells you about her friend that is sick with a fever, sore throat and mild skin rashes all over her body. The illness seems to be going around in her friend's neighbourhood, with several cases reported. Although the illness does not seem severe so she still wants to visit her friend.

4.2.1 What would you suspect her friend's diagnosis to be? Give reasons you're your answer (2)

4.2.2 Do you think your sister should visit her friend? Justify your answer. (2)

4.2.3 How could your sister be protected from this illness? (1)

SECTION C (28)

QUESTION 5

(28 MARKS)

- 5.1 A woman from a rural community having no health center 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.
- 5.1.1 What disease is the baby at risk of having? (1)
- 5.1.2 Mention any two (2) clinical features you expect the baby would have due to this condition. (2)
- 5.1.3 Explain the strategies in place to prevent the occurrence of this disease. (2)
- 5.2 Using the F diagrammatic illustration, discuss how the "Fs" play an important role in the transmission and control of faecal oral transmitted diseases. (6)
- 5.3 On the 8th of May 2006, a 39 year old man was admitted to the hospital in Windhoek, Namibia after developing AFP. On the 5th of June 2006, a diagnosis of poliomyelitis was confirmed after isolating the virus from the patient's stool specimen. This was the first case of polio in Namibia in 10 years.
- 5.3.1 What does AFP stand for and justify why monitoring of AFP is important in the prevention of polio epidemics. (2)
- 5.3.2 Elaborate on the strategies for polio eradication. (5)
- 5.4 Elaborate on the risk factors and strategies for prevention of **EITHER** cervical cancer **OR** malnutrition. (10)

TOTAL MARKS = 100

END OF QUESTION PAPER