



Kasarani Campus
Off Thika Road
P. O. Box 49274, 00101
NAIROBI
Westlands Campus
Pamstech House
Woodvale Grove
Tel. 4442212
Fax: 4444175

KIRIRI WOMENS' UNIVERSITY OF SCIENCE AND TECHNOLOGY
UNIVERSITY EXAMINATIONS, 2024/2025 ACADEMIC YEAR
FIRST YEAR, FIRST SEMESTER EXAMINATION
FOR THE DEGREE OF BACHELOR OF SCIENCE (MATHEMATICS)
KLC 2100: HEALTH EDUCATION & HIV/AIDS

DATE: 13TH DECEMBER, 2024

TIME: 11:30AM-1:30PM

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS

QUESTION ONE: COMPULSORY (30 MARKS)

MPOX VIRUS

The ongoing first global outbreak of the Mpox virus in humans (formerly known as monkeypox) was first recognized in May 2022 when several countries in Europe and North America, where the disease was not endemic. The World Health Organization declared the infection a public health emergency of international concern on 23 July 2022. As of 19 September 2023, over 90,000 laboratory-confirmed cases have been reported worldwide from 115 Member States across all six WHO regions, with over 26,000 cases in the European region. Mpox is a zoonotic disease caused by a double-stranded DNA virus classified in the Orthopoxvirus genus of the Poxviridae family. The disease is endemic to western and central Africa, especially in the Democratic Republic of Congo. Transmission before 2022 was predominantly zoonotic, related to direct contact with infected animals. Most cases detected outside the endemic areas responded to sporadic and limited outbreaks linked to exotic pet trade or travel activity. During the current global outbreak, the transmission has occurred through close person-to-person contact, predominantly sexual contact through high-risk sexual practices, without epidemiological links to western or central Africa, and mainly, but not exclusively, in men who have sex with men (MSM). HIV infection has been overrepresented in the current outbreak, with approximately 40–50% of the cases being coinfecting with HIV. The illness is usually mild symptomatic, including few skins and or mucosal lesions at inoculation sites, fever, and local lymphadenopathy, and 15–30% present with proctitis. However, more severe cases have been described, especially in immunosuppressed patients., HIV-related immunosuppression, with necrotizing skin lesions, lung involvement, central nervous system infection, secondary bacterial infections, sepsis, and ocular involvement. As of 19 September 2023, a total of 157 deaths have been reported globally, which demonstrates that Mpox can be a life-threatening disease in an immunosuppressed host and that ongoing measures are needed to prevent infection and disease spread, this can be complicated due to ignorance and other related human behavior.

The earlier vaccinia virus vaccination administered against smallpox provided cross-immunity to the Mpox virus as both viruses are closely related to Orthopoxviruses. Discontinuation of routine smallpox vaccination following smallpox eradication in the early 1980s and thus waning immunity with no immunity coverage in the population 40 years of age has probably been an important risk factor for the current emergence of Mpox as a public health threat.

Use the above case study to answer question one

- a) **Analyze** the possible origin of Mpox disease. (6 Marks)
- b) Explain why HIV is highly linked to Mpox, especially in African countries. (6 Marks)
- c) Mpox was first recognized in May 2022 in several countries in Europe and North America, where the disease was not endemic. **Explain** why mpox is categorized as not endemic in some countries, but pandemic in some. (6 Marks)
- d) **Explain** biological health precautions that can be taken to control Mpox. (6 Marks)
- e) As WHO, clinical officer, **Examine** the possible roles you would recommend to the government to take in institutions to prevent and control life-threatening diseases. (6 Marks)

QUESTIONS TWO: (20 MARKS)

- a) The County government in its strategic plan is thinking about the policies that can help in managing HIV/AIDS in Jojo slum area. **Discuss** effective practices that can be implemented in such areas to reduce the pandemic. (7 Marks)
- b) The Ministry of Education has approached you to give your contribution to Comprehensive Sexuality education. **Explain** how irresponsible sexuality can lead to poor health. (7 Marks)
- c) Discordant couples risk infecting their children with HIV. **Explain** the measures they can put into practice for the family's safety. (6 Marks)

QUESTIONS THREE: (20 MARKS)

- a) **Evaluate.** Signs and symptoms do not confirm one is HIV positive. (7 Marks)
- b) Despite scientific advancement, HIV remains a challenge to the world. **Explain** the biological challenges of the HIV/AIDS pandemic. (7 Marks)
- c) **Discuss** how the government and society can contribute to community health. (6 Marks)

QUESTIONS FOUR: (20 MARKS)

- a) You have been invited to a public health lecture for Kiriri Women's University students on Women and HIV. **Explain** some of the key topics of concern you would highlight. (7 Marks)
- b) **Explain** why the HIV prevalence rate is higher in Kiambu County is different from Garissa County. (7 Marks)
- c) **Demonstrate** different aspects of counseling and its benefits. (6 Marks)

QUESTION FIVE: (20 MARKS)

- a) Discuss. HIV/AIDS is a personal responsibility, rather than scientific solutions. (7 Marks)
- b) There are many factors influencing HIV Infection. **Evaluate** measures that can help HIV clients to lower viral load. (7 Marks)
- c) Human health is influenced by a number of factors, Discuss human behavior in relation to prevention and control. (6 Marks)