**UCC 101 – HIV-AIDS ASSIGNMENTS**

1. Explain the relationship between Gay people and discovery of HIV **(10 marks)** **.**
2. **Initial Impact- The early years of the HIV/AIDS epidemic in the 1980s primarily affected gay men, leading to heightened awareness and urgency within the community.**
3. **Health support- The crisis highlighted disparities in healthcare and prompted advocacy for better access to treatment, not just for HIV/AIDS but for broader LGBTQ+ health issues.**
4. **Stigmatization-The virus was initially labelled a "gay disease," which contributed to widespread stigma and discrimination against LGBTQ+ individuals, complicating public health responses.**
5. **Community Response- Gay men mobilized quickly to address the crisis, forming support networks and advocacy groups like ACT UP, which played a crucial role in raising awareness and pushing for research.**
6. **Research Participation- Many gay men participated in clinical trials and research studies, often becoming key contributors to the understanding of HIV/AIDS.**
7. **Awareness Campaigns- The LGBTQ+ community led innovative public health campaigns, using art, media, and personal stories to educate others about safe practices and the realities of living with HIV.**
8. **Cultural Shifts-The epidemic catalyzed significant cultural shifts within the gay community, fostering a sense of solidarity and shared identity among those affected.**

**2**..Explain the relationship between CD4+ cells and and the HIV viral load **(5 marks)**

**The CD4 and viral load tests measure different things. But the pattern of results for both tests are usually related.**

**When viral load is low or going down, CD4 counts will be higher or going up.**

**When CD4 counts are low or going down, viral load will be high or going up.**

**A few weeks after infection, HIV viral load is very high, and the CD4 count drops.**

**Then as the immune system brings viral load down, CD4 counts go back up again.**

**There is sometimes a time lag between viral load and CD4 changes:**

**After starting HIV treatment (ART) viral load drops quickly. The CD4 count only increases slowly (often over several months).**

**If treatment fails and the viral load level starts to rebound, the CD4 count may take a while before it starts to fall.**

**As viral load gets higher, the CD4 count will nearly always start to fall within a few** **weeks.**

3.Explain the reasons as to why people from key populations are more susceptible to HIV infection. **( 5 marks)**

1. **Participating in high risky behaviors- Individuals in key populations, such as men who have sex with men, sex workers, and people who inject drugs, may engage in higher-risk behaviors. This includes unprotected sex and sharing needles, which increase the likelihood of HIV transmission.**
2. **Limited Access to Healthcare- Many key populations face barriers to accessing healthcare services, including stigma, discrimination, and legal issues. This can prevent them from getting tested or receiving treatment.**
3. **Social Stigma-Stigmatization of key populations often leads to social isolation and discrimination. This can discourage individuals from seeking help or disclosing their HIV status, further complicating prevention efforts.**
4. **Lack of Education- There may be gaps in knowledge about HIV transmission and prevention methods within these communities. Without adequate education, individuals may not take necessary precautions.**
5. **Mental Health Issues-Many people in key populations experience mental health challenges due to societal stigma and discrimination. This can lead to risky behaviors, such as substance use, which increases vulnerability to HIV.**
6. **Economic Challenges- Economic instability can push individuals into high-risk situations, such as transactional sex or drug use, to meet basic needs. This increases their likelihood of exposure to HIV.**
7. Given that village A has a population of 10,000 people. Out of the people with pneumonia (5%) in this village 30% are HIV positive. Calculate the prevalence of HIV in village A  **( 5 marks)**

**Total population of village A = 10,000 people.**

**People with pneumonia = 5% of 10,000 = 0.05 × 10,000 = 500 people.**

**People with HIV among those with pneumonia = 30% of 500 = 0.30 × 500 = 150 people.**

**Prevalence of HIV in village A = (Number of HIV-positive people / Total population) × 100**

**Prevalence of HIV in village A = (150 / 10,000) × 100 = 1.5%**

**So, the prevalence of HIV in village A is 1.5%.**

1. Kala discovered that he was HIV positive two years ago. He had no signs of any diseases for one year. In the last one month, Kala had reached the AIDS stage. explain **(5Marks)**

**Kala was diagnosed as HIV positive two years ago. At this stage, he likely experienced what is known as acute HIV infection, which can occur within 2 to 4 weeks after exposure to the virus. Symptoms during this phase can be flu-like and may include fever, sore throat, and fatigue. However, some individuals remain asymptomatic, which can mislead them into thinking they are healthy. Asymptomatic Phase**

**Following his initial diagnosis, Kala remained asymptomatic for a full year. This period is often referred to as the clinical latency stage, where the virus is still active but reproduces at very low levels. Many individuals live long periods without significant symptoms, and this can be a deceptive phase, as the virus continues to affect the immune system.**

**Progression to AIDS**

**In the last month, Kala has reached the AIDS stage. This progression can happen when the immune system has been severely damaged, typically when the CD4 cell count drops or when the individual develops opportunistic infections or certain cancers related to HIV.**