

## DREAMLAND SECONDARY SCHOOL

### S.1 CHEMISTRY

#### END OF TERM TWO

Attempt all the questions in the paper

#### Item 1

Below is an article extracted from the New Vision of 27th /May/2022. The website to which it was downloaded has been provided at the end of the article. Read the article carefully and answer the questions that follow.

#### TOP STORY

"Air pollution killing more than HIV" -New vision official. Gerald Tenywa. Journalist @New Vision. Every home in Uganda has either been infected or affected by HIV and AIDS. They have either lost a relative or have suffered as a loss of a breadwinner. Air pollution has gone steps ahead of HIV in affecting Ugandans as it has claimed more lives than HIV, Daniel Okello , the director in charge of environment at Kampala Capital City Authority (KCCA) has said. "We lost 23,000 People in 2019 due to HIV in Uganda. In the same period, 26000 People died as a result of cardiovascular diseases linked to air pollution," he said. Okello was speaking during the launch of the air quality awareness week at the Uganda Media Centre in Kampala on 4 May 2022. The event, themed "Be air aware, be prepared" ,attracted top officials from the National Environment Management Authority( NEMA), toMakerere University and Ministry of Health, who called for increased awareness and actions to curb air pollution. Okello mentioned of two types of air pollution -outdoor pollution and household or indoor pollution which are all greatest environmental threat into human health around country pointing out Kampala, Mukono and Jinja with the poorest air quality which is five times way above the critical threshold of World Health Organisation. Okello said indoor air pollution resulting from cooking with biomass fuel particularly charcoal, firewood, coal ,burning of organic fuels such as kerosene, burning of grass and waste products. Partial combustion of these fuels lead to emission of carbon monoxide gas, which is poisonous if inhaled. Worse than indoor air pollution, he added, is outdoor air pollution include old cars spewing fumes. As the cars burn fuels, such as diesel and petrol to power engines, they release poisonous gases such as carbon monoxide and also lead from motor vehicle emissions, dust from unpaved roads and construction sites, factories release fumes filled with sulphur dioxide gas which leads to acid rains and carbon monoxide gas which is poisonous .Burning of wastes including plastics , produces dioxins and furans, which cause cancer.

Dr Ivan kimuli from Makerere University's lung institute said they have done studies that indicate that 11% of the population suffers from asthma and that was being aggravated by poor air quality and the same in study indicated that children in rural settings had " better and less



damaged lungs" than those in urban settings, who were exposed to pollutants in the air. NEMA's director for environment monitoring and compliance, Waiswa Ayazika, said: " the government currently making a clear plan to improve air quality involving every body's responsibility to save the current and future generation."

[http://www.newvision.co.ug/category/health/air-pollution-killing morepeople-than-hiv-133316](http://www.newvision.co.ug/category/health/air-pollution-killing-more-people-than-hiv-133316).

- (a).State what is meant by the term "air pollution" ? (02 scores)
- (b)From the article; state the different types of air pollution and how each type of air pollution is caused. (08 scores)
- (c)From the article, state the main air pollutants and show their effects to man. (08 to scores)
- (d)Suggest a reason why Kampala, Mukono and Jinja have the poorest air quality which is five times away above the critical threshold of World Health Organization? (02 scores)
- (e)Suggest any 5 solutions that can be adopted into the government's strategic plan of how air pollution in the country can be greatly reduced (05 scores)

## ITEM 2

Bakaita Godfrey always washes his clothes at any time and they can get dried at any time whether on a hot day, inside the house or even on a windy day.

- (a)Explain why clothes dry,
  - (i) On a dry day
  - (ii) Inside the house.
  - (iii) On a windy day.
- (b) i) From the knowledge of different states of matter, explain the process of rain formation.
  - (ii) State any three importance of water to man.

