



EAGLE'S NEST SECONDARY SCHOOL KAMPALA

Uganda certificate of education

MID TERM II EXAMINATIONS 2023

CHEMISTRY

S.3

TIME:2Hrs

NAME:.....STREAM:.....

Signature.....

INSTRUCTIONS

This paper consists of two sections **A** and **B**. Attempt all questions in this section. Section A consists of questions that require short responses while section B consists of questions that requires you to write detailed responses.

SECTION	MARKS	COMMENT
A		
B		

SECTION A

1. The agricultural sector is a bedrock of Uganda 's economy. In 2021, agriculture contributed around 23.8 % to the economic growth of Uganda. Chemistry plays a pivotal role in the strength of Uganda 's agricultural sector through improved agricultural productivity.



Explain briefly 3 ways how chemistry has enabled the presence of such variety of quality fruits in Nakasero market. (03 marks)

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

2. Classify each of the following as either physical or chemical change

a) Hydrochloric acid reacts with potassium hydroxide to produce a salt, water and heat. (1mk)

.....

b) A soft piece of pure sodium metal is sliced and placed on water. (1mk)

.....

c) Water is heated until it begins to boil and produce steam. (1mk)

.....

d) The compound Potassium chlorate decomposes (breaks down) into Potassium chloride solid and oxygen. (1mk)

.....

e) Iron metal rusts. (1mk)

.....

3) A Senior two student from Eagle's Nest secondary school carried out an activity to obtain juice from a fruit. She Cleaned the fruits by washing using clean water 3. Peeled the fruits to remove the unwanted parts including seeds. 4. Placed the fruits into the blender and blend them to a liquid solid mixture 5. Removed the mixture from the blender and filter off the solid parts of the fruits using a kitchen sieve. 6. Add some water while filtering. 7. Added some sugar to improve on the taste of the juice 8. Packaged the made juice into clean dry bottles. Gave the juice made a name.

Results and discussions

a). Identify the ways how she can improve on the quality and safety measures of the juice in terms of color, taste and stability. (5mks)

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

b). Identify the substances that can be added to make the juice suspension stable. (2mks)

.....

.....
.....
.....
.....
4a). Discuss the method of separation you will use for separation of iron from sand.(3mks)

.....
.....
.....
.....
.....
.....
b) . Name two solid substances that can be purified by sublimation. (2mks)

.....
.....
c). When solid iodine was heated, it directly changed into a violet vapor without melting.

(i) What name is given to this process? (1mk)

.....
.....
(ii) Name another two substances that can undergo a similar process like iodine. (2mks)

.....
.....
5(a) Why should we recycle materials? (2mks)

.....
.....
b) What are problems involved in recycling plastics? (4mks)

.....
.....
c) Describe the dangers of using plastics to the environment and man. (5mks)

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

SECTION B

7. Nsangi Agnes a 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 bread winner. 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, May 4/11 The event, themed “Be air aware, be prepared”, attracted top officials from the National Environment Management Authority (NEMA), Makerere 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 to 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 Organization. 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 leads 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 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 is currently making a clear plan to improve air quality involving every body's responsibility to save the current and future generation."

(a). State what is meant by the term "air pollution"? (02 marks

(b)From the article; state the different types of air pollution and outline how each type of air pollution is caused. (08 marks)

(c)From the article, state the main air pollutants and show their effects to man.

(08marks)

(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 marks)

(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 marks)

END

"WINNERS NEVER QUIT"