

Student's Name: ..... Stream: .....

School: .....

Class	Stream
S. 2	

(Write your Name, Class Stream and School in the spaces provided.)

545/1

**CHEMISTRY**

(Theory)

**Paper 1**
**SEPTEMBER 2022**
**1 Hour 30 min.**

**EDUCAN SCHOOL**
**Uganda Lower Secondary Certificate of Education.  
(U.L.S.C.E)**
**S.2 COMPETENCE BASED ASSESSMENT EXAMINATIONS**
**CHEMISTRY**
**(THEORY)**
**Paper 1**
**1 Hour 30 minutes**
**INSTRUCTIONS:**

- This paper consists of 5 questions which are **ALL** Compulsory
- Answer **all** questions in the spaces provided.
- Illustrations in form of drawings should be made where necessary, with a sharp pencil.

**For official use only**

Number	Score	Teacher's comment
1.		
2.		
3.		
4.		
5.		

**SECTION A**

1. The figure shows a set of apparatus in the laboratory. Use them to answer the questions that follow



- a) Name the apparatuses.

*(03 marks)*

A ..... B .....  
C ..... D .....  
E ..... F .....  
G .....

- b) State the functions of the apparatuses from the experiment in the picture above.

*(03 marks)*

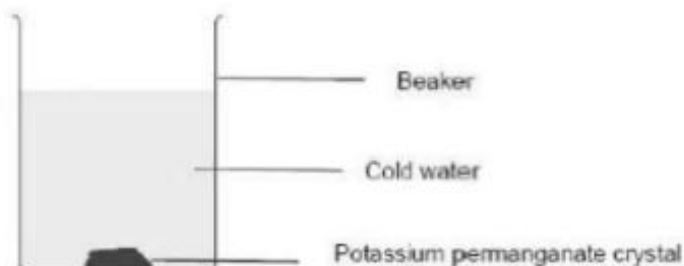
A .....  
G .....  
F .....

- c) Outline four ways how you can conduct yourself in the laboratory during a chemistry experiment to ensure that every one in the laboratory is safe.

*(04 marks)*

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2. A large crystal of potassium permanganate was placed in the bottom of a beaker of cold water, and left for several hours.



(a) Describe what would be seen:

(i) after five minutes.

**(02 marks)**

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(ii) after several hours.

**(02 marks)**

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(b) Explain your answers using the idea of particles.

**(03 marks)**

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(c) Explain how you are able to sense the smell of fish being fried by mummy in the kitchen while seated in the dining room.

**(03 marks)**

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3. You must have learnt the fact that even though Chemistry is a laboratory science, it doesn't stop in the laboratory. In our everyday life, we use very many materials, with different properties. The pictures below show different materials that we use at home.

- (a) using your knowledge about using materials, suggest the type of material and from the list, write down examples of things made from that particular material. (05 marks)



<i>Material</i>	<i>Name of item (s) from the picture</i>

- (b) The use of plastics in our daily life has greatly had a negative impact on our natural environment in the past years.

- (i) Outline any two harmful effects of plastics in our environment. (02 marks)

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- (ii) Outline three ways in which we can reduce the harmful effects of plastics in our environment. (03 marks)

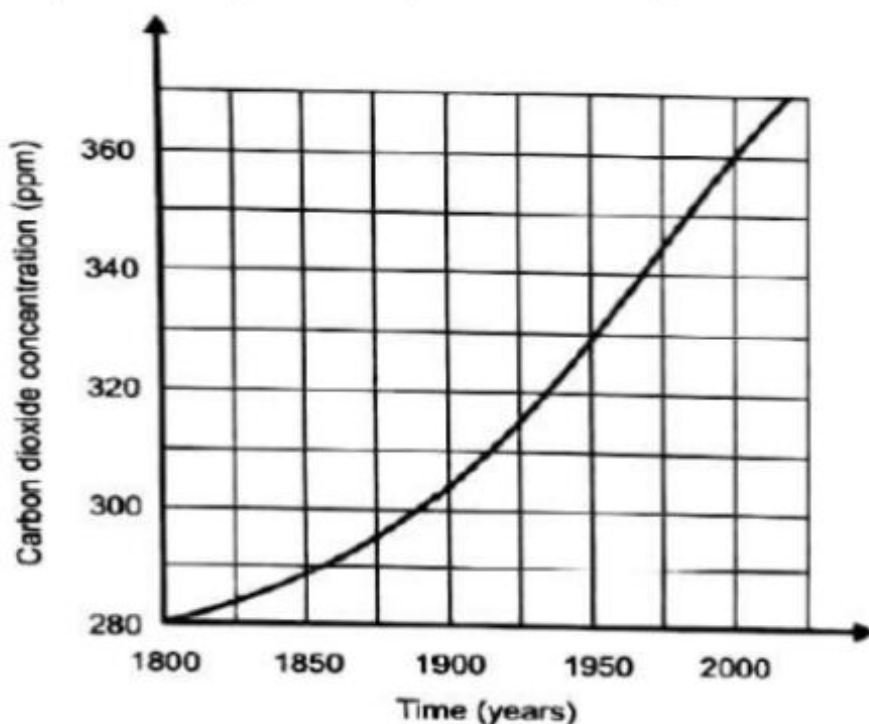
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4. Air is a mixture of different gases, and carbon dioxide is one of them. The average composition of carbon dioxide in Air is about 0.03%. However, in the recent years, the amount of carbon dioxide in the atmosphere has greatly increased due to various human activities and this poses a great threat to human life. The graph below shows the carbon dioxide concentration in the earth's atmosphere over the past two hundred years measured in Jinja town. Study it carefully and answer the questions that follow;



- (a) Calculate by how much the carbon dioxide concentration increased from the year 1800 to the year 1950. (02 marks)

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- (b) State any **two** factors that could have contributed to the increased amounts of carbon dioxide in air between 1950 and 2000 (02 marks)

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- (c) Explain the effect that an increased carbon dioxide concentration in the air can have on the environment over a long period of time. (03 marks)

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- (d) However, much as carbon dioxide gas can have harmful effects to human life, there are also ways how carbon dioxide gas can be beneficial in human life and industry. Outline any three uses of carbon dioxide gas in our daily life. (03 marks)

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5. Shadrach, a senior two student from EDUCAN school, added some dilute hydrochloric *acid*, little at a time, to an *alkaline* solution of sodium hydroxide in a conical flask.

- (a) Explain what you understand by the terms;

- (i) Acid. (02 mark)

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- (ii) Alkali. (02 mark)

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- (b) (i) Write a word equation for the reaction that occurred between hydrochloric acid and sodium hydroxide. (02 marks)

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- (c) Imagine your young brother has been stung by a bee as he is playing around the compound with flowers, as a student of chemistry that has studied about acids and bases, describe a simple procedure that you would follow to give him first Aid and give reasons for the choice of your method. (04 marks)

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**END**