

Student's Name:Who inspires you.....

Future Aspiration.....

Class	Stream
S. 1	

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

545/1
CHEMISTRY
(Theory) **Paper 1**
October 2022
1 ½ hours

Uganda Certificate Of Education

S.1 COMPETENCE BASED ASSESSMENT EXAMINATIONS

Term III
CHEMISTRY
(THEORY)
Paper 1
1 Hour: 30 minutes

INSTRUCTIONS:

- This paper consists of **five** questions.
- 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.		

1. (a) The figure below shows some examples of important chemical reactions in our daily life.



- (i) Briefly explain the meaning of the chemical reactions shown above (02 marks)

Combustion

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.....

Rust

.....
.....

- (ii) State one condition of each process to occur (02 marks)

Combustion

.....
.....

Rust

.....
.....

- (iii) Write the chemical name and formula of rust (02 marks)

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.....

- (iv) How are the above process similar to each other (02 marks)

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.....

- (v) How can you prevent your metallic equipments from rusting (02 marks)

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2. During laboratory work scientists often separate mixtures into their respective components and proceed with further investigations and analysis

- (a) Briefly what do you understand by the term mixture (02 marks)

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(b) State the best method of separating the following mixtures (05 marks)

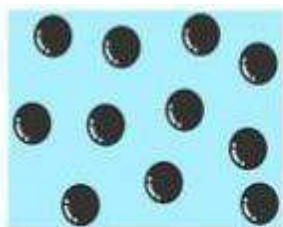
- (i) Water and ethanol
- (ii) Pigments of green leaf
- (iii) Iron fillings and sulphur
- (iv) Sodium carbonate and sodium hydrogen carbonate
- (v) Components of air

(c) Identify the component of air which can be detected by (03 marks)

- (i) Glowing splint
- (ii) Anhydrous copper (II) sulphate
- (iii) Calcium hydroxide

3. Matter is anything that occupies space and has weight. Matter exists in different **States** . A **state** of matter is one of the distinct physical forms in which matter exists.

(a) Below are diagrams showing different states of matter. Use them and answer the questions that follow



T



X



Z

(a) Name the states of matter (1.5 marks)

- (i) T
- (ii) X
- (iii) Z

(b) Name the change of state from Z to T and give two examples of substances that undergo that change (1.5 marks)

Change

Examples

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(c) Give one example of mixtures of state X that are (01 mark)

i. Miscible

.....

ii. Immiscible

.....

(d) One of the states of matter above has the highest rate of diffusion

(i) Briefly explain the meaning of the term diffusion (01 marks)

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(ii) Identify the state of matter which has the highest rate of diffusion (01 mark)

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(iii) State two factors that affect diffusion (02 marks)

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.....

(iv) State one example of a mixture of X and Z and state how it can be separated (01 mark)

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4. a) Anyige Fiona a senior one student who always attends the chemistry lessons, when she was home she saw a corroded plastic cup, tablets in a packet , a bare copper wire and always interacted with soap, alcohol, cosmetics and sprays.

i) As a classmate to Anyige Fiona, what is the use of each of the following substances talked about above? (3.5 marks)

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ii) State what Anyige Fiona saw at home is composed of.

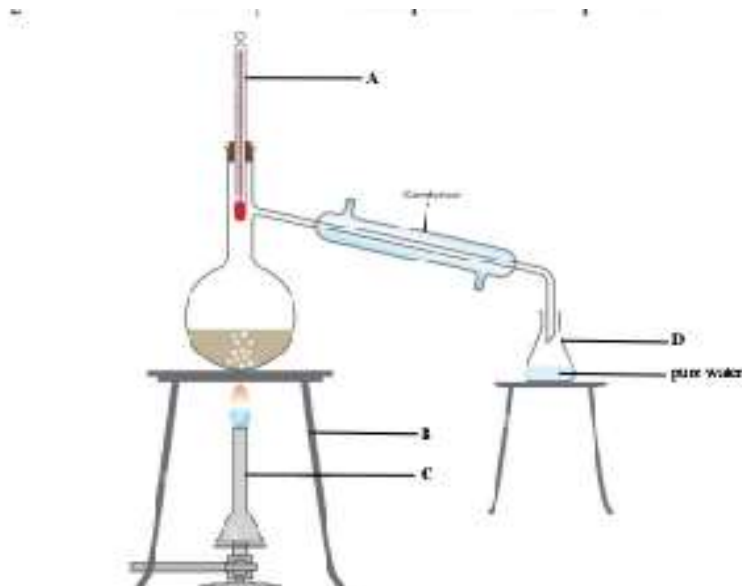
b) Chemistry as a science looks at the structure, composition and characteristics of matter, state the five steps you as a young scientist can follow to understand the science of chemistry. (05 marks)

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(c) Give one example of (01 mark)

- (i) Physical change
- (ii) chemical change

5. The figure below shows an experimental setup used to obtain pure water in the laboratory
 (a) label the apparatus on the diagram (02 marks)



(b) Give the use of each apparatus you have named in (a) (02 marks)

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(c) What name is given to the above process (01 mark)

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(d) What is a flame ? suggest the best type of flame recommended for laboratory use and give one reason (02 marks)

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(e) Write down the symbols of the following elements (03 marks)

Element	Bromine	Silver	Potassium	Nitrogen	Aluminium	Silcon
Symbol						

END