

Name.....Student's No.....

Signature.....Signature.....

545/1

Chemistry.

Theory.

2 hrs

Nov-2022.

CHEMISTRY DEPARTMENT

Uganda Certificate of Lower secondary education

END OF TERM 3 EXAMINATIONS

Chemistry

S.1

2 hours.

INSTRUCTIONS.

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

No.	Marks	Comment.
1		
2		
3		
4		
Total.		

SECTION A.

Attempt all questions in this section

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.



Figure 1 is a picture taken from Nakasero market.

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

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2.Nakitende primsy, a S.1 student wanted to minimise space in her suitcase, she eventually got 2 small empty jerry cans of 5 litres , and poured all mineral water from packed bottles into the 2 jerry cans, which she forgot to cover well.



After 2 weeks,

- (i) She observed that her water had changed taste.
- (ii) She then asked herself a question, “ Is water contaminated? “
- (iii) She made a prediction “ Water may be containing impurities “
- (iv) She then went to the laboratory and carried out some tests on her water to know whether it contained impurities.
- (v) She analysed the results she obtained, which did not match with those pure water.
- (vi) She made a conclusion by saying “ the change in taste of water makes it impure “

Use the information above and answer the questions that follow.

- (a) What method is given to all steps from (i) to (vi) Nakitende Primsy , a S.1 student used to carry out investigations on her water.

(01 mark)

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- (b)State one importance of the method named in (a) in carrying out investigations. (01 mark)

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(c) Name one criteria which Nakitende used to carry out test on her water to determine whether it was pure or not. (01 mark)

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(d) Name one physical method which Nakitende would use in the laboratory to obtain pure water from the impure water. (01 mark)

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3. When a car is left parked in a compound on a very hot day, the car tube increases slightly in size than before. Using particle theory of matter, explain the observation? (03 marks)

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SECTION B.

4. Ice cubes of pure water were removed from the refrigerator at -20°C and heated in a test tube. Ice started to change to a liquid 4 minutes after heating. It all changed to liquid after 2 minutes from the time it started to change to liquid. On further heating, it started to boil after 3 minutes. Boiling took 2 minutes.

Sketch a temperature-time graph for heating of ice cubes. Label and name all the features. Use your graph and explain using particle theory of matter the changes of state that took place. (15 marks)

End.

