Candidates Name: .....**Index No**.....

Signature: .....

545/2
CHEMISTRY
Paper 2
(Practical)
Jul/Aug 2024
2 Hours

JINJA JOINT EXAMINATIONS BOARD

Uganda Certificate of Lower Secondary Education

MOCK EXAMINATIONS - JULY/AUGUST 2024

CHEMISTRY

Paper 2

Practical

2 Hours

INSTRUCTIONS TO CANDIDATES:

This paper consists of **one compulsory** examination *item. Answers to this item are to be written in the spaces provided in this booklet. Use* **blue** *or* **black** *ink.*
All working must be clearly shown. Graph paper will be provided.
Mathematical table and silent non-programmable scientific calculators may be used.
You are **not** *allowed to use reference books (i.e. text books, booklets on qualitative analysis etc.)*
Candidates are advised to carefully read the item, make sure they have all the apparatus and chemicals they may need and then **plan** *appropriately before starting.*

 Turn Over

Scenario 2

A fireworks factory uses Sulphur to produce gun powder which is used as a propellant. Towards the end of the year, there was a very high demand for fireworks to be used during the new year eve. The fireworks factory got orders from different five-star hotels and event managers to supply over 1000pack units (450kg) of fireworks. The Sulphur is obtained from a reaction between sodium thiosulphate and dilute hydrochloric acid according to the following equation.

$$Na_2S_2O_{3(aq)} + 2HCl_{(aq)} \longrightarrow 2NaCl_{(aq)} + SO_{2(g)} + H_2O_{(l)} + S_{(s)}$$

The formation of Sulphur with time is noted by the disappearance of a cross marked (X) on a white tile/ paper placed under the reaction flask/ container.

The factory chemist has advised that the amount of Sulphur produced at room temperature is not enough to meet the high demand of Sulphur in a specific time. He proposes an increase in temperature in order to yield more Sulphur required to meet the demand in a specific time.

You are provided with the following.

BA1 which is a solution of hydrochloric acid.

BA2 which is a solution of sodium thiosulphate.

Task:

a) As a learner of chemistry;

i) design an experiment you will carryout to investigate the rate of formation of Sulphur.

.....

.....

.....

.....

.....

.....

ii) Carry out the experiment and record your findings.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

...

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

iii) Treat your results appropriately.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

...

b) What can the factory chemist deduce from your findings?

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

 End