

Name.....Stream.....

545/1 CHEMISTRY (Theory)

Uganda Certificate of Education

TERM 2 HOLIDAY WORK

S.3 CHEMISTRY

Paper 1

Item 1

Market research indicates that most users prefer powdered form of detergents for use in laundry work due to its effectiveness during washing with various water sources.

Task

As a chemistry learner;

(a) Explain the category users prefer.

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(b) Guide the users to understand how the product works.

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c) Advise the users on the challenges associated with the long term use of the product.

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(d) Make an evaluation of the different products on market for laundry work.

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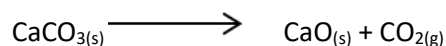
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Item 2

An industry wanted to produce lime for treatment of acidic soils. The production of lime involves heating limestone strongly which results into it's decomposition according to the equation;



The industry is also interested to know how much gas is evolved during the process since the gas is useful.

Before the production, an experiment was performed where 35g of limestone were heated until there was no further change. You have been contacted for help.

Task

As a chemistry learner;

(a) Explain the category of the products.

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b) Explain the properties of the gaseous product that make it useful in daily life.

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(c) Calculate the mass of the gaseous product measured that was formed.

(Ca= 40, O= 16, C= 12)

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(c)Guide them on the environmental impact of the product.

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SECTION B

Item 3

Air is a mixture of different components. It contains 21% oxygen. Due to a wide spread of respiratory illnesses caused by COVID-19, there was an increased demand for oxygen by patients in hospitals. The government supply of oxygen is not enough and is planning to set up an oxygen production plant with minimal environmental impact.

However, the science club members in your school would like to know how the production process will be carried out.

Task;

As a chemistry learner, prepare a write up you will use during the presentation.

Item 4.

People in most remote villages of Uganda often suffer from scarcity of some synthetic products. Sometimes their only available suppliers hike prices for these products. A women's group in Kisoga village, Mukono district is planning to manufacture a soapless detergent as a new business project to reduce on their expenses and to increase their annual gross sales. The group is planning to set up a soapless detergent production plant with minimal environmental concerns in this village.

Some locals of this village are also complaining that their valuable land is about to be taken up by these women in order to set up their production plant. However, the science club members in your school would like to know how the process of production will be carried out

The head of science club has appointed you to sensitize the club members.

Task;

Prepare a write up that you will use during the presentation

PART II

Item 5

Mulindwa the cattle keeper, grazes his cattle on a community land. During the dry season, he practices bush burning and also takes his cattle to drink water from the community water source. Mulindwa's practices have raised concern in the community.

The area chairperson has organized a meeting to create awareness for Mulindwa and the community.

Task.

As a chemistry student make a write-up of the message the chairperson will present to the community.

Item 6.

During her school holidays, Eva visited her aunt who works at a stone quarry. She noticed that explosives were being used to blast big rocks to form small stones and there was a lot of dust rising into the air. Besides the social benefits, Eva was concerned about what would happen to the site and the community if the activity continued over time..

Task;

As chemistry learner, make a write-up to respond to Eva's concern.

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