



JINJA MODERN SECONDARY SCHOOL

Uganda certificate of education

S.2 CHEMISTRY

Paper 1

2 hours

Name.....

Signature.....

INSTRUCTIONS

*This paper consists of two sections **A** and **B**. It has **six** examination items*

*Section **A** has **two compulsory items** .*

*Section **B** has two parts **I** and **II**. Answer one item from each part.*

*Answers to section **A** must be written in the spaces provided while those of section **B** must be written on the answer booklets provided.*

*Any additional items responded to will **not** be scored.*

SECTION A

Attempt all items in this Section

1. An agribusiness company in Uganda organized a washing competition which was held in Walukuba division, Jinja district in order to evaluate its products. Two ladies were each provided with a full jerry can of bore hole water, a basin and a stained cloth. One lady was provided with detergent **A** another with detergent **B**. Mrs. Menha, the usual annual winner of the competitions used detergent **A** to clean the cloth but it remained with some dirty marks even after rinsing it several times. Mrs. Kirunda used detergent **B** and won the race as she cleaned the cloth with one rinse. Mrs Menha was frustrated and could not understand what went wrong this time round.

Task;

- a) As a chemistry learner,
i. Explain categories of products, **A** and **B** used by the two ladies.

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- ii. Help Mrs. Menha to understand how the product works.

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- b) Advise the two ladies on the challenges associated with the use of the products.

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2. Peter's father died before completing the construction of their house. Mainly doors and windows are missing, so Peter is in the process of making good and strong window and door frames for this house without affecting the environment. He is aware that there are various materials on the market for making window and door frames. He also knows that in order for one to produce good quality frames and windows; he should select the right material with suitable qualities and properties. However, he is still confused with the choice and has approached you for some advice.

Task;

Use your chemistry knowledge to:

a) Explain

- i. The categories of the materials.

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- ii. The suitability of the materials.

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b) Advise Peter on the choice of the materials.

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SECTION B

Part One

Attempt one item from this Part.

3. 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 soapy 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 soapy 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.

4. 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.

(11scores)

Part two

Attempt one item from this Part.

5. People of Kigaragara village in Isingiro district can easily cross into Tanzania for charcoal business. Due to increase in population of this district,

many natural forests have been cleared to provide charcoal for use as fuel and natural swamps have been reclaimed to create space for settlement. These happenings have left the district officials wondering.

As a result, the government through the district officials is planning to create awareness to the people in Isingiro District through sensitization workshops organized in different villages.



Task;

As a chemistry learner, prepare a short presentation that you will deliver during the workshop when invited. (10 scores)

6. Kagulu village in Buyende district is developing at a faster rate. Many of the recently existing swamps and forests are now filled with buildings. Stone quarrying is the order of the day among most the locals in the village. Recently the wells have started drying up and yet the little water available is not fresh. The few residents that practice crop husbandry also say that seasons have changed and this has caused famine in the area. All these happenings have left many of the residents wondering. A sensitization workshop is to be organized in the district by the government through National Environment Management Authority (**NEMA**).

Task;

As chemistry learner, prepare a brief presentation you will deliver upon invitation.

(10 scores)

END (Now, I can see...)