

NAME.....SIGNATURE.....



KAMSSA PRE REGISTRATION II 2025
Uganda Certificate of Education
S.4 CHEMISTRY
PAPER 1 (Theory)
TIME: 2 Hours

INSTRUCTIONS TO CANDIDATES

- ✓ *This paper consists of two sections; A & 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.*
- ✓ *Answer four (4) items in all.*
- ✓ *Answers to section A must be written in the spaces provide while these of section B must be written on the answer booklets/sheets provided*
- ✓ *Any addition item (s) answered will not be scored.*

ITEM 1

Bukedde TV organizes food preparations competitions every year. In 2024, two contestants Tracy and Prossy applied to participate in the competitions and the winner was promised a pizza for the most delicious meal prepared. Tracy prepared a very good meal which looked very nice and produced a very interesting aroma. However, on testing chef yassin complained that the food was tasteless.

When the second chef, Alex tested, he told Tracy that she had missed adding salt and therefore Tracy missed prize.

TASK; As a learner of chemistry help;

(a)(i) Explain the category of the substance Tracy missed adding in the food.

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(ii) State the chemical elements present in the substance in a(i) above and write the formula of their ions.

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(b) Explain how the substance is formed.

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(c) Evaluate the use and impacts of the substance.

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ITEM 2

Science club members of Kyadondo SS were investigating the reaction of period 3 elements with water.

Ngambo, a member of the club first considered two elements X and Y and the following observations were obtained for the reaction with water.

A

Observations; Reacted vigorously while floating on surface of cold water forming an alkaline solution with evolution of hydrogen gas.

B

Observation; Reacted slowly with cold water forming alkaline solution and hydrogen gas but when heated with steam, forming a white solid and hydrogen gas

TASK: As a learner of chemistry;

(a) State the category of elements X and Y.

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(b) Predict the reaction of the other elements in period 3 with water.

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(c) Advise Ngambo about the dangers associated with the reaction of these

elements with water.

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(d) Help the science club members identify elements X and Y.
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SECTION B

Part I

Answer one from this part in the answer sheets provided

ITEM 3

Cement was first produced by Joseph ASP in England in 1924.

He was a brick layer and investor of modern Portland cement. However, research has confirmed that lime and cement production has undergone tremendous development since its beginning, some 2000 years ago and now so many different types of cement are being produced to market. Thus, this has enabled progressive urbanization from local soil-built houses to cemented brick houses. And so, cement is an important chemical in most societies. You were part of the chemistry class that visited one of the factories and the process of production was explained to the class. You have been invited to a radio talk show to explain how cement is produced, after your presentation, Okello, one of the callers wants to know if there are any impacts associated with the process you have talked about.

TASK: As a learner of chemistry;

(a) Make a write up of the sensitization message to the end of the talk show.

(b) Identify the social benefits of manufacturing lime and cement.

(c) Explain some of the dangers to the community arising from the manufacture of lime and cement.

(d) Okello, a villager from Zombo village has been identified as one of the victims of the above dangers in (c), as a chemistry learner, advise Okello on the steps he may take to minimize the dangers arising from the manufacture of cement.

ITEM 4

Due to increased demand for the construction of strong and modern houses, iron bars are used but are few in supply. To ensure the availability of iron bars, the government is considering setting up an iron production plant in a certain area. However, the residents of the area need to be sensitized about the industrial process, social benefits, side effects and how they can be overcome.

Your head teacher has been identified to sensitize the residents but has no knowledge about the matter.

TASK: As a learner of chemistry, prepare a write up that your head teacher will use to sensitize the residents.

PART II

Answer one item from this part in the answer sheets provided

ITEM 5

Edward lives along the channels of a water body which supplies the entire village of Masajja with water. He has many cows which drink and move with in the water body. He has a big plantation of crops next to the water body on which he uses a massive amount of fertilizers to ensure that he gets high yields.

He normally cools his machine in water and his sister earns a living by watching clothes daily for people in masajja. The sister uses detergents and soap to watch the clothes.

The particles of Edward's family have raised concern in the community. The area chairperson has organized a meeting to create awareness for Edward, his family and the community.

TASK: As a learner of chemistry, make a write up of the message the chairperson will present to the community.

ITEM 6

Natural resources especially rocks, hill and mountains have been destroyed as a result of increasing population and human activities. This has attracted the attention of the officials from the National Environment Management Authority (NEMA).

The officials are planning to create awareness to the people of the country through sensitization workshops organized in different communities.

TASK: As a learner of chemistry, make a write up of the presentation the NEMA officials would deliver during the sensitization workshop.

END