

STUDENT'S NAME.....

S.3

CHEMISTRY PAPER 1

INSTRUCTIONS

This examination paper consists of two sections A and B.

It has six examination items

FOR SCORER'S USE ONLY

ITEM NO	1			2			3/4			5/6		
BASIS CODE	T	D	E	C	X	I	P	S	B	N	M	Be
WEIGHTED SCORE												

SECTION A

Respond to All the items in this section in the spaces provided

ITEM 1

At the end of year chemistry club party at St. Luke Widi SS, a variety of drinks were served. Daniel chose to take one type of drink labeled **A**, after he drank it, initially made him feel excited, relaxed and started speaking un connected words and later became un conditioned and lacked self-control. Her friend at the party Asunita at the party chose to take a drink labelled **B** because she was feeling thirsty and after she felt relaxed and relieved but she never became like Daniel. Their other club members at the party wanted to know more about the type of drink Daniel took and its impact to life and have approached you for more guidance



A



B

TASK

As chemistry learner,

- a) State the category of the Drink Daniel took at the party.

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- b) Suggest any other two uses of the active ingredient contained in the drink Daniel took.

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- c) Explain how excess consumption of Daniel's drink is dangerous to Daniel's life and advise him accordingly

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- d) Compare the drinks Daniel and Asunita took at the club's party

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ITEM 2

Anzimuke wanted to produce a gas that can help him in boiling and cooking his water and meals but doesn't know how the gas looks like and how to do it. He was advised that he can react 74.98% by mass of element X and the remaining percentage to be of element Y by mass to form 1 mole of the product that has a vapour density of 8.05. Anzimuke still wanted to know more about the compound formed and approached one of the greatest chemists around for further assistance. The chemist told him that the compound is written as XY_n . Where X and Y are not the actual symbols of elements. The chemist also informed him that X belongs to group **IV** and period **2** while Y belongs to group **I** and period **1** of the periodic table as shown below but this left him more confused and has come to you for further guidance

The Periodic Table									
H ¹ Hydrogen <i>A_r</i> = 1									He ² Helium <i>A_r</i> = 4
Li ³ Lithium <i>A_r</i> = 7	Be ⁴ Beryllium <i>A_r</i> = 9	B ⁵ Boron <i>A_r</i> = 11	C ⁶ Carbon <i>A_r</i> = 12	N ⁷ Nitrogen <i>A_r</i> = 14	O ⁸ Oxygen <i>A_r</i> = 16	F ⁹ Fluorine <i>A_r</i> = 19	Ne ¹⁰ Neon <i>A_r</i> = 20		
Na ¹¹ Sodium <i>A_r</i> = 23	Mg ¹² Magnesium <i>A_r</i> = 24	Al ¹³ Aluminium <i>A_r</i> = 27	Si ¹⁴ Silicon <i>A_r</i> = 28	P ¹⁵ Phosphorus <i>A_r</i> = 31	S ¹⁶ Sulphur <i>A_r</i> = 32	Cl ¹⁷ Chlorine <i>A_r</i> = 35	Ar ¹⁸ Argon <i>A_r</i> = 40		
K ¹⁹ Potassium <i>A_r</i> = 39	Ca ²⁰ Calcium <i>A_r</i> = 40								

TASK

As chemistry learner;

- a) Categorise the nature of the compound XY_n formed

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- b) Describe how X and Y reacted to form a compound XY_n by using the cross method

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c) Explain the properties of the compound formed

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d) Help anzimuke to know the value of n on XY_n and hence help him to know the molecular mass of the compound formed .

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e) Explain one impact of burning XY_n in limited supply of oxygen and how it can be mitigated.

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SECTION B

ITEM 3

Upon the discovery of coal reserves in some parts of Tororo, the locals raised environmental impact concerns due to its exploitation. They also lacked comprehensive knowledge about why coal should be conserved. This has prompted the government to conduct a district workshop to raise awareness amongst the public to be informed about the coal which is one form of crude oil. You have been invited to address the public on behalf of government



TASK

As a chemistry learner, prepare a short message you will use to deliver in the workshop

ITEM 4

The Kampala city council Authority, KCCA is moving forward with a plan to partner with an investor to establish a Biogas facility at Kitezi landfill in Kampala. This investment is a crucial step towards a cleaner city and energy sustainability. Recognizing the public environmental concerns, KCCA officials have launched an education campaign to make the public informed about the mega project. You have been invited to attend and address the public at a radio talk show.

TASK

As a chemistry learner, prepare a short presentation you will deliver on the radio talk show.

PART II

ITEM 5

The liquid soap manufacturing industry has run shortage of sulphonic acid they use in liquid soap making and the manager of the industry has thought of importing another from another country but one of the industrial chemists has told the manager of the factory that sulphonic acid can be got by reacting sulphuric acid from oleum with benzene and the manager seems not to understand how the process of production of concentrated sulphuric acid will occur, its impacts to the environment and its other social benefit to the locals apart from providing employment opportunities to the locals and has approached you since he was told that you recently got some knowledge about the process.



TASK

As a chemistry learner make a write up you will use while explaining the process to the manager

ITEM 6

The government through Uganda investments Authority has cleared an investor to set up a petroleum production facility from crude oil in Hoima district to solve the problem of high prices of petroleum in Uganda. However the locals are concerned about its impacts resulting from the process of production and other social benefits other than employment opportunities to the locals and how the process of production will occur. You have been invited to address the locals in one of the sensitization workshops conducted at the district main hall.



TASK

Make a write up presentation you will use during the presentation as a chemistry learner.

MERRY CHRISTMASS.