

**NKULA COMMUNITY DAY SECONDARY SCHOOL****2018-2019 FORM TWO END OF TERM ONE EXAMINATION****CHEMISTRY****Time Allowed: 2hrs****Instructions**

- *The paper contains 8 pages, please check*
- Make sure you write your **name** in the spaces provided on all the pages of this paper before you **start answering the questions.**
- **Follow the instruction for each question number**

**SECTION A****QUESTION 1 (TO BE ANSWERED BY INTERNAL CANDIDATES ONLY)**

(a). Which is the best method to use when separating the following mixtures?

(i) Iron filling with sand \_\_\_\_\_ (1 mark)


(ii) Water with ethanol and ethanoic acid

\_\_\_\_\_ (1 mark)

(b). Draw a well-labeled filtration apparatus. (4 marks)



(c) Using a clearly labeled diagram, describe how chromatography could be used to show that ink contains a mixture of dyes.

[illegible]

**(6 marks)**

**QUESTION 2 (TO BE ANSWERED BY ALL CANDIDATES)**

In the following sentences one word is wrongly used. Correct the sentences by replacing the wrong word with only one correct word

(a). Sugar melts in water

\_\_\_\_\_ (1 mark)

(b). When a liquid changes into a solid we say it vaporises.

\_\_\_\_\_  
\_\_\_\_\_ (1 mark)

(c). Water is a solute for common salt

\_\_\_\_\_ (1 mark)

**QUESTION 3 (TO BE ANSWERED BY INTERNAL CANDIDATES ONLY)**

(a). What is a solution?

\_\_\_\_\_ (1 mark)

(b). Give an example of a solution of a

(i). liquid in liquid

\_\_\_\_\_ (1 mark)

(ii). gas in a liquid

\_\_\_\_\_ (1 mark)

(iii). gas in a gas

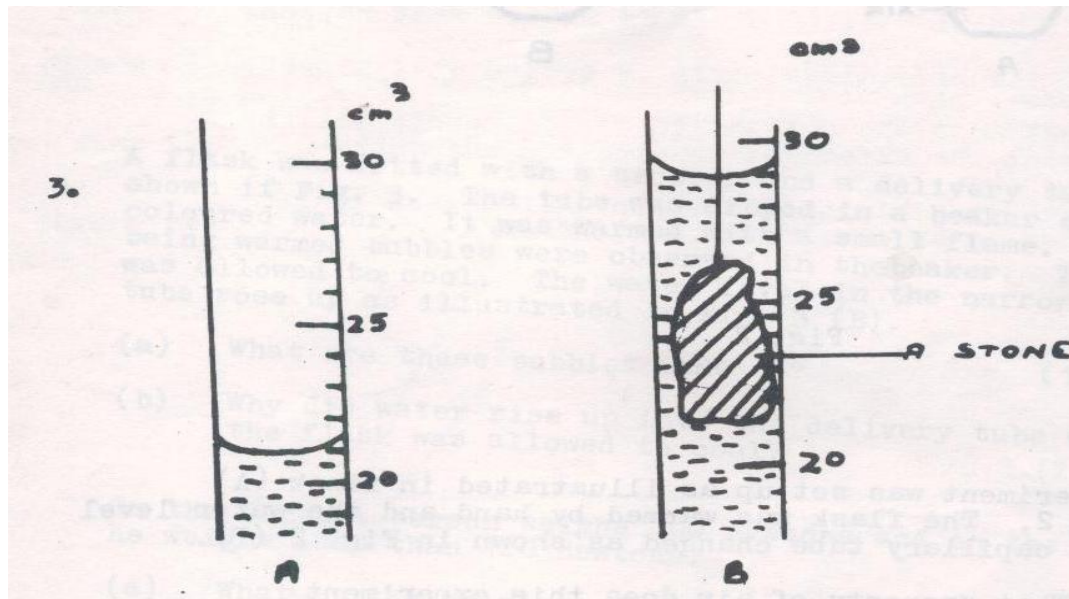
\_\_\_\_\_ (1 mark)

(c). What name is given to a solution of a metal in another metal?

\_\_\_\_\_ (1 mark)

**QUESTION 4 (TO BE ANSWERED BY ALL CANDIDATES)**

Figure below shows part of a measuring cylinder containing water.



(a). What name is given to the curved surface formed by water in the measuring cylinders?

\_\_\_\_\_ (1 mark)

(b). What is the volume of the stone?

\_\_\_\_\_ (1 mark)

(c). If the stone has a mass of 20 g calculate the density of the stone.

(3 marks)

**QUESTION 5 (TO BE ANSWERED BY ALL CANDIDATES)**

(a) Convert 73 minutes to seconds

(3 marks)

(b) Discuss any two importances of units of measurements

(4 marks)

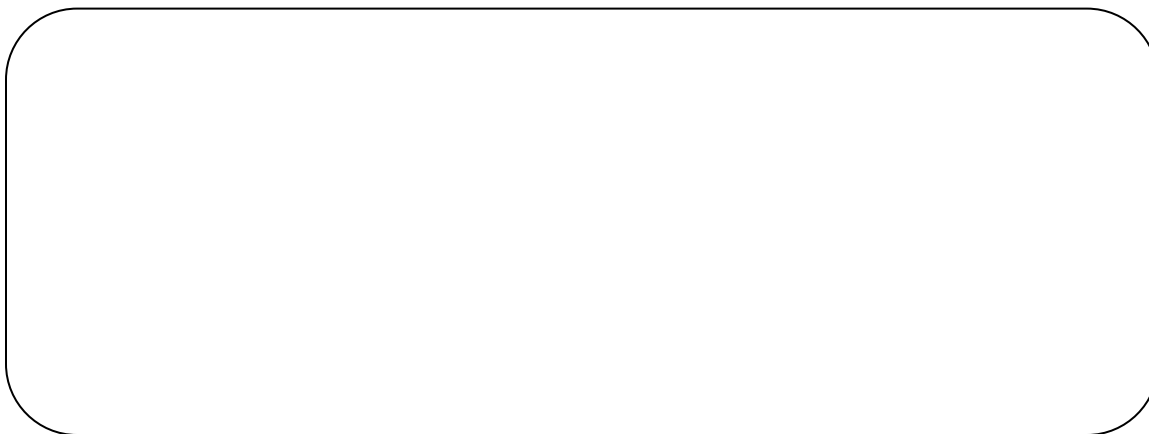
**QUESTION 6 (TO BE ANSWERED BY ALL CANDIDATES)**

(a) What warning does the following symbol mean in the laboratory?



(1 mark)

(b) Apart from this symbol, draw any safety symbols commonly used chemistry laboratory and its meaning



**QUESTION 7 (TO BE ANSWERED BY ALL CANDIDATES)**

(a) List down any two categories of laboratory apparatus

\_\_\_\_\_  
\_\_\_\_\_ (2 marks)

(b) A Form 1 student at Lunzu Secondary School was asked to measure exactly 10 ml of sulphuric acid solution. List down two apparatus she could use to measure the required volume

\_\_\_\_\_  
\_\_\_\_\_ (2 marks)

(c) Which apparatus can you use to measure 10 grams of sodium chloride (table salt) in the laboratory?

\_\_\_\_\_ (1mark)

**QUESTION 9 (TO BE ANSWERED BY ODL CANDIDATES ONLY)**

(a) Define the following terms

(i) Atomic radius

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (2 marks)

(ii) Electron affinity

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (2 marks)

(b) Table below shows the first 20 elements of the periodic table

H							He
Li	Be	B	C	N	O	F	Ne
Na	Mg	Al	Si	P	S	Cl	Ar
K	Ca						

(i) Write down the atomic number of Si

\_\_\_\_\_ (1mark)

(ii) Work out the electron configuration of K given that its atomic number is 19

\_\_\_\_\_ (1mark)

(iii) How can aluminum (Al) attain an inert gas configuration?

\_\_\_\_\_ (1mark)

(iv) Explain what happens to the atomic radius as you move from Na to Cl

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (2 marks)

(c) Explain why fluorine is more reactive than chlorine.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (3 marks)

(d) Discuss why the second ionization energy for Mg is greater than its first ionization energy

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(3 marks)

**SECTION B (TO BE ANSWERED BY ALL CANDIDATES)**

**10.** Design an experiment that could be conducted to determine density of an irregular solid **(10 marks)**

**11.** Discuss the importance of five chemistry careers in the society. **(10 marks)**

END OF QUESTION PAPER

HAVE A NICE HOLIDAY