NAME……………………………………………………………ADM .NO…………CLASS……

ST. CLAIRE GIRLS’ HIGH SCHOOL-GATITU.

P.O BOX 327-01030 GATUNDU .

CHEMISTRY FORM THREE

PAPER I

TERM THREE 2017

INSTRUCTIONS .

Answer all the questions.

 QUESTIONS

1.The pH values of some solutions labeled A to E are given in the table below .Use the information to answer the questions that follow.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| pH | 14.0 | 1.0 | 8.0 | 6.5 | 7.0 |
| Solution | A | B | C | D | E |

a)Identify the solution with concentration of hydroxide ions.Give a reason for your answer. (2mks)

b)Which solution can be used as a remedy for acid indigestion in the stomach .(1mk)

c)Which solution is distilled water? (1mk)

2.a)Define the term salt . (2mks)

b)State three types of salts . (3mks)

c)Complete the following table by indicating which salt is soluble or insoluble . (3mks)

|  |  |
| --- | --- |
| Salt | Soluble/insoluble |
| Beryllium nitrate |  |
| Lead (ii) nitate |  |
| Potassium chromate (iv) |  |

3.a)State two differences between electrolyte and conductor . (2mks)

b)Graphite is a non-metal yet it conducts electric current.Explain. (1mk)

4.a)Outline three differences between luminous and nonluminous flame .(3mks)

b)State three reasons why most laboratory apparatus are made of glass .(3mks)

5.A certain liquid was suspected to be water .Describe two chemical tests that can be used to confirm that the liquid is water. (2mks)

6.a)Differentiate between atomic number and mass number . (2mks)

b)The table below shows the isotopic masses and corresponding % abundance of the isotopes for X1,X2 and X3 .

|  |  |  |  |
| --- | --- | --- | --- |
| ISOTOPE | X1 | X2 | X3 |
| ISOTOPIC MASS | 24 | 25 | 26 |
| 5 ABUNDANCE | 82.8 | 8.1 | 9.1 |

Calculate the relative atomic mass of X . (2mks)

7.The diagram below represents an arrangement for preparing and collecting dry hydrogen gas .Study it and answer the questions that follow.

a)Write the equation for the reaction that produces hydrogen . (1mk)

b)Name the suitable substance that liquid k is likely to be . (1mk)

c)Explain why it is not advisable to use concentrated nitric (v) acid is not used as an alternative of hydrochloric acid in this experiment . (1mk)

8.a)State Charles ‘ law . (1mk)

b)A sealed balloon contained 80cm3 at 100o C .Calculate new volume of the gas at 30 o C (2mks)

9.The electronic arrangement for elements represented by letters are A,B,C and D are:

A 2.8.6 B 2.8.2 C 2.8.1 D 2.8.8

a)Select element which forms :

i)Double Charged cation (1mk)

ii)A soluble carbonate (1mk)

b)which element has the smallest atomic radius? (1mk)

10.Below is a setup of apparatus used to investigate the effect of electric current on molten lead (ii) bromide.

a)Name the electrode. (2mks)

 K……………………………………

 L…………………………………….

b)State and explain observation made when the switch is closed . (2mks)

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 WISH YOU SUCCESS .