COLLEGE PRIVE BILINGUE MONTESQUIEU

MONTESQUIEU PRIVATE BILINGUAL HIGH SCHOOL

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WORK DISCIPLINE SUCCESS

REPUBLIC OF CAMEROON

PEACE - WORK – FATHERLAND

ANNEE SCOLAIRE 2024/2025

Third Harmonized Examination Chemistry;

MARCH 2025

Form 4

25

DEPARTMENT OF CHEMISTRY

SECTION A/ GENERAL KNOLEDGE

1) The mole refers to the ;

A) Amount of substance that has as many elementary particles as 12g of carbon-12-isotopes. B) Amount of substance that has as many elementary particles (atoms, mollecules and ions) as there are in 12g of carbon-12-isotopes

C) Amount of substance that has as many elementary particles as there are atoms in 12g of carbon12-isotopes D) Amount of

2) How many moles are there in 500cm3 of 0.01M solution ? a) 300g b) 200g c) 150g d) 30g

3) 4.0g of sodium hydroxide in 250cm3 of solution contains.

A) 0.40mole/dm3 b) 0.10mole/dm3 c) 0.04mole/dm3 d) 0.02mol/dm3

SECTION B ;

1. Define the following terms
   a. A molar solution.....
   ..... (1mks)
   b. A standard solution.....
   ..... (1mks)
   c. Name two characteristics of a standard solution
   .....
   ..... (2mks)
   d. What mass of the NO_3 will be contained in the cornical flask to which $25cm^3$ of the solution has been transfered by means of a epithetic. (N=14 O=16)
   .....
   .....
   .....
   ..... (3mks)
2. What is a limiting reactant ?
   .....
   ..... (1mks)
3. What mass of water will be formed when 13.2g of $(NH_4)_2SO_4$ react with an excess of $Ca(OH)_2$
   a. Name the limiting reactant :..... (1mks)

b. Write the equation of the reaction

..... (1mks)

c. Calculate the mass of water.....

.....

.....

.....

.....

..... (3mks)

4. 2.4g of magnesium metal gère added to a beaker, which contains $250cm^3$ of 2M H_2SO_4 solution. There for the resulting solution was reacted with 0.1M KOH solution. Calculate. Calculate the volume of the alkaline use in the reaction.(Ca=40, N=14, O=16, S=32, H=1)

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..... (3mks)

5. Find the percentage composition of water of cristallisation in sodium carbonate tetrahydrate($Na_2CO_3.10H_2O$)

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..... (2mks)