CHEMISTRY ASSESSMENT TEST 1
TIME : 90 MINUTES

INSTRUCTIONS: Attempt all questions.

1. (a) Define the following terms: (03 marks)
   (i) An acid

……

   (ii) A base

……

   (iii) A salt

……

   (b) State what would be observed if an aqueous solution of each of the following substances was tested with a blue or red litmus paper.
   (i) Ammonium Chloride (02 marks)
   Blue litmus paper

……

   Red litmus paper

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   (ii). Sodium Chloride (02 marks)
   Blue litmus paper

……

   Red litmus paper

……

   (iii). Sodium ethanoate (02 marks)
   Blue litmus paper

……

   Red litmus paper

……

   (c) Write the equation for the reaction between potassium oxide and
   (i) Water (01 ½ marks)

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   (ii). Hydrochloric acid (01 ½ marks)

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2. (a). Potassium Chloride can be prepared from hydrochloric acid.

   (i). Name another reagent that is used with Hydrohloric acid to produce potassium Chloride (½ mark)

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(ii). Which method is used to prepare potassium chloride using the 2 reagents above? (0½ mark)

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(iii). Write an equation for the reaction leading to the formation of potassium chloride. (1 ½ marks)

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(b). Write an equation for the reaction between

(i). Ammonium Chloride and Water (1 ½ marks)

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(ii). Copper (II) Oxide and dilute Sulphuric acid (1 ½ marks)

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3. The table below gives information of four atoms P, Q, R and S that belong in the periodic table. Use the information to answer the questions that follow.

Atom	Group	Electronic configuration
P	I	2:8:8
Q	VII	2:8:8
R	III	2:8
S	VI	2:8

(a) Write the electronic configuration of atom;

(i) P (0 ½ mark)

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(ii) R (0 ½ mark)

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(iii) S (0 ½ mark)

……

(iv) Q (0 ½ mark)

……

(b) Identify the atoms that belong to the same period in the periodic table. (01 mark)

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(c) Write the formula of the compound and type of bond formed between atom; (04 marks)

(i) P and Q

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(ii) S and Q

……

(iii) P and S

……

(iv) R and Q

……

4. (a) Write the chemical formulae of each of the following compounds. (06 marks)

(i) Potassium chloride ……

(ii) Ammonium sulphate ……..……..

(iii) Copper(II) hydroxide ……

(iv) Sodium peroxide ……....……

(v) Calcium phosphate ……..……

(vi) Carbon disulphide ……..……

(vii) Silver Sulphate…….....

(viii) Lead (II) Chloride……..…….……

(ix) Barium nitrate…….……

(x) Magnesium Hydrogen Carbonate…….....……

(xi) Potassium Hydrogen Sulphate…….……...

(xii) Ammonium Carbonate……..

(b) Name the following chemical compounds (08 marks)

(i) Na_2SO_4 ……

(ii) KNO_2 ……

(iii) PCl_5 ……..

(iv) SO_3 ……

(v) Fe_2O_3 ……

(vi) H_2S ……

(vii) $Al_2(SO_4)_3$ ……

(viii) $Ca(HCO_3)_2$ ……

(ix) $CuSO_3$ …….

(x) $AlPO_4$ ……

(xi) $FeSO_4$ ……..…….

(xii) CO_2 ……...……..

(xiii) $ZnCO_3$ ……...……

(xiv) $Pb(NO_3)_2$ ……...……..

(xv) AgCl…….

(xvi) SO_2 ……...……

(c) Complete and balance the following equations for reaction.

(i) $Zn_{(s)} + HCl_{(aq)} \longrightarrow$ (01½ marks)

(ii) $Al_2O_{3(s)} + HCl_{(aq)} \longrightarrow$ (01½ marks)

(iii) $CaCO_{3\,(s)} \xrightarrow{\text{heat}}$ (01½ marks)

(iv) $Ca(OH)_{2\,(aq)} + H_2SO_{4\,(aq)} \longrightarrow$ (01½ marks)

5. (a). What is meant by the following and in each case give an example.

(i) Salt (1 ½ marks)

……...……..……

……

(ii) Acid Salt (1 ½ marks)

……...……..……

……...……..……

(iii)Normal Salt (1 ½ marks)

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……

6. (a). Write an equation of reaction between

(i). Zinc Metal and dilute Sulphuric acid (1 ½ marks)

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(ii). Lead (ii) Hydroxide and dilute Nitric acid (1 ½ marks)

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(iii). Barium Carbonate and dilute Hydrochloric acid (1 ½ marks)

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(iv). Sodium metal and chlorine gas (1 ½ marks)

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(v) Barium nitrate and Sodium sulphate (1 ½ marks)

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(vi). Potassium hydroxide and Hydrochloric acid (1 ½ marks)

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END

What men have done, man can do!!!