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## Revision Exercise on Valency and Chemical Compounds

### O-level Form 2

RSE005

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#### Instructions:

- Answer all questions in the spaces provided.
- Estimated time 50minutes

#### SECTION A: Multiple choice questions

1.i. What is the valency of element X in the compound  $X_2(SO_4)_3$ ?

A. 2 B. 3 C. 4 D. 5

ii. What is the valency of element M in the compound  $MSO_4$ ?

A. 2 B. 3 C. 4 D. 5

iii. Element X reacts with chloride to form a compound with formula  $XCl_4$ . The formula of the oxide of X is A.  $XO_4$  B.  $XO$  C.  $X_2O$  D.  $XO_2$

iv. If the nitrate of element P has the formula  $PNO_3$ , what is the formula of its oxide? A.  $P_2O_3$ . B.  $P_2O_5$ . C.  $P_2O$ . D.  $PO_2$

v. If the chloride of element M has the formula  $MCl_3$ , what is the formula of its sulphate? A.  $MSO_4$ . B.  $M_2SO_4$ . C.  $M_2(SO_4)_3$ . D.  $M_3(SO_4)_2$ .

i	ii	iii	iv	v

#### SECTION B

2. (a) Define the following

(i) atomicity of an element

.....  
.....

(ii) radical.

.....  
.....

(iii) valency.

.....  
.....  
(b)(i) Differentiate between molecule and atom.

.....  
.....  
.....  
(ii) Give three examples of molecules that contain:

Similar kinds of atoms

.....  
.....  
Different kinds of atoms

.....  
.....  
(c) How many atoms of each element are present in the following compounds?

(i)  $\text{H}_2\text{SO}_4$ .....  
.....

(ii)  $\text{FeSO}_4$ .....  
.....

(iii)  $\text{Pb}(\text{NO}_3)_2$   
.....  
.....

(d) A compound is a pure substance that made up of two or more elements. How many elements make up the following compounds? In each case identify those elements.

(i)  $\text{H}_2\text{O}$ .....

(ii)  $\text{CO}_2$ .....

(iii)  $(\text{NH}_4)_3\text{PO}_4$   
.....  
.....

3.(a) Write the chemical formulae of the following

(i) potassium sulphate. ....

(ii) calcium chloride. ....

(iii) aluminium nitrate. ....

(iv) ammonium sulphate.....

(b) Name the following compounds

(i)  $\text{CaSO}_4$ .....

(ii)  $\text{Cu}(\text{NO}_3)_2$ .....

(iii)  $\text{CuCl}_2$ .....

**Best regards,**

**The Diaprof Team**

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