

Grade	Institute	Day	Time	Starting Date
10	Channa Asela Institute, Mt. Lavinia	Saturday	02.30pm – 05.30pm	5 <sup>th</sup> September
10	Shakthi Institute, Colombo 04	Friday	02.30pm – 04.30pm	4 <sup>th</sup> September
10	Shakthi Institute, Waterfront, Colombo 2	Tuesday	02.30am – 04.30pm	8 <sup>th</sup> September
11	Channa Asela Institute, Mt. Lavinia	Saturday	10.30am – 01.30pm	5 <sup>th</sup> September
11	Shakthi Institute, Colombo 04	Monday	02.30pm – 04.30pm	7 <sup>th</sup> September
11	Shakthi Institute, Waterfront, Colombo 2	Wednesday	02.30pm – 04.30pm	2 <sup>nd</sup> September
Past Paper	Channa Asela Institute, Mt. Lavinia	Saturday	06.00pm – 08.00pm	5 <sup>th</sup> September
Past Paper	Shakthi Institute, Colombo 04	Monday	04.45pm – 6.45pm	7 <sup>th</sup> September
Past Paper	Shakthi Institute, Waterfront, Colombo 2	Wednesday	0.4.45pm – 06.45pm	2 <sup>nd</sup> September

## Chapter 16 - Change in matter

Valence 1	Valence 2	Valence 3	Valence 4
H-Hydrogen	Be-Beryllium	B-Boron	C-Carbon
Li-Lithium	Mg-Magnesium	Al-Aluminium	Si-Silicon
Na-Sodium	Ca-Calcium	Fe-Ferric	Pb-Plumbic
K-Potassium	O-Oxide	<u>PO<sub>4</sub>-Phosphate</u>	
Cl -Chloride	S-Sulfide		
Ag-Silver	Zn-Zinc		
Cu-Cuprous	Cu-Cupric		
<u>NH<sub>4</sub>-Ammonium</u>	Fe-Ferrous		
<u>OH-Hydroxide</u>	Pb-Plumbous		
<u>MnO<sub>4</sub>-Permanganate</u>	<u>CO<sub>3</sub>-Carbonate</u>		
<u>NO<sub>3</sub>-Nitrate</u>	<u>SO<sub>4</sub>-Sulphate</u>		
<u>NO<sub>2</sub>-Nitrite</u>	<u>SO<sub>3</sub>-Sulphite</u>		
<u>HCO<sub>3</sub>-Bicarbonate</u>	<u>MnO<sub>4</sub>-Manganate</u>		
<u>HSO<sub>4</sub>-Bisulphate</u>	<u>CrO<sub>4</sub>-Chromate</u>		
<u>HSO<sub>3</sub>-Bisulphite</u>	<u>Cr<sub>2</sub>O<sub>7</sub>-Dichromate</u>		
<u>ClO<sub>3</sub>-chlorate</u>			
<u>OCl-Oxychloride</u>			

- Radicals are charged particles having more than one element.

(Radicals are the ones which are underlined in the tables)

### Rules when writing chemical formulae

Rule 1 – Write the symbol of the elements. Exchange the valences and write on the lower right side of the elements.

Eg. Aluminium oxide

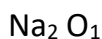


Ferric oxide



Rule 2 – If the valence is 1, then don't write 1

Eg. Sodium oxide

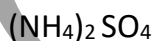


Potassium chloride

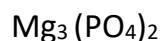
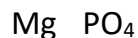


Rule 3 – Before writing a valence to a radical, write the radical within brackets.

Eg. Ammonium sulphate

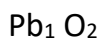
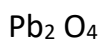


Magnesium phosphate

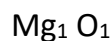
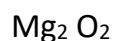


Rule 4 – Simplify the valences if possible

Eg. Plumbic oxide



Magnesium oxide



**Matter**

1) Matter has a ..... and occupy .....

2) Matter can be in one of the three ..... states

(i) .....

(ii) .....

(iii) .....

3) Matter is made up of one ..... or many ..... with a specific number of .....

Eg.  $O_2$ ,  $O_3$ ,  $H_2O_2$ ,  $H_2O$ ,  $H_2SO_4$ ,  $H_2SO_3$ ,  $SO_2$ ,

4) Change in the ..... state without changing its ..... is called a ..... change

Eg – ..... becoming water

Water becoming .....

Water vapour becoming .....

..... becoming ice

5) Changing the ..... of a particles without changing its ..... and the number of ..... is also called a ..... change

Eg - ..... stones

Produce rice ..... by grinding rice .....

Producing salt ..... from salt .....

Changing the ..... or the number of ..... in a matter is called a ..... reaction.

Eg - Mg and O<sub>2</sub> becoming .....

H<sub>2</sub>O<sub>2</sub> becoming ..... and .....

CuSO<sub>4</sub> becoming .....

7) During a ..... reaction ..... (..... materials) become .....

Eg - ..... → .....

8) During a ..... reaction, the number of ..... belonging to each ..... in the ..... should be ..... to the number of ..... belonging to those ..... in the .....

Eg - CaCO<sub>3</sub> → ..... + .....

There are ..... Ca atom, ..... C atom and ..... O atoms as .....

There are ..... Ca atom, ..... C atom and ..... O atoms in its .....

2 KMnO<sub>4</sub> → ..... + ..... + .....

There are ..... K atoms, ..... Mn atoms and ..... O atoms as .....

There are ..... K atoms, ..... Mn atoms and ..... O atoms in .....

9) Therefore when writing a chemical ....., it has to be .....

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