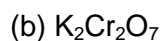


1. What is meant by the term 'symbol'? Give the qualitative and quantitative meaning of the term 'symbol'.
2. Name three metals whose symbols are derived from:
  - (a) The first letter of the name of the element
  - (b) From their Latin names
3. Explain the meaning of the term 'valency'. State why the valency of the metal potassium is +1 and of the non-metal chlorine is -1.
4. What is meant by the term 'variable valency'? Give a reason why silver exhibits a valency of +1 and +2.
5. Give examples of eight metals which show variable valency. State the valency of sulphur in:
  - (a)  $\text{SO}_2$
  - (b)  $\text{SO}_3$
6. State the valency in each case and name the following elements or radicals given below.  
Chlorine, Nickel, Nitrogen dioxide
7. State the variable valencies of the following elements and give their names. Ag, Hg, Fe
8. State which of the following elements or radicals are divalent –  
Lithium, Nickel, Ammonium, Bromide, Sulphite
9. Explain the meaning of the term 'compound' with a suitable example. State the main characteristics of a compound with special reference to the compound iron [II] sulphide.
10. Name the elements in the compound & give the formula – of the following compounds.  
Nitric acid, Carbonic acid, Phosphoric acid, Acetic acid, Blue vitriol
11. Explain the term 'chemical formula'. State why the molecular formula of zinc carbonate is ' $\text{ZnCO}_3$ '.
12. Balance the following equations:
  - i.  $(\text{NH}_4)_2\text{SO}_4 + \text{NaOH} \rightarrow \text{Na}_2\text{SO}_4 + \text{H}_2\text{O} + \text{CO}_2$
  - ii.  $\text{Mg}_3\text{N}_2 + \text{H}_2\text{O} \rightarrow \text{Mg}(\text{OH})_2 + \text{NH}_3$
  - iii.  $\text{KMnO}_4 + \text{HCl} \rightarrow \text{KCl} + \text{MnCl}_2 + \text{H}_2\text{O} + \text{Cl}_2$
  - iv.  $\text{AlN} + \text{H}_2\text{O} \rightarrow \text{Al}(\text{OH})_3 + \text{NH}_3$
  - v.  $\text{NH}_3 + \text{O}_2 \rightarrow \text{N}_2 + \text{H}_2\text{O}$  [burning of  $\text{NH}_3$ ]
13. Write the formula of the following compounds:
  - (a) Potassium chloride
  - (b) Sodium hydroxide
  - (c) Calcium nitrate
14. Write the formula of the following compounds:
  - (a) Aluminium chloride
  - (b) Copper [I] chloride; copper [II] chloride
  - (c) Iron [II] sulphate; Iron [III] sulphate

15. Write the names of the following compounds:



16. Balance the following equations:

