

Language of chemistry DPP 1

1. Fill in the blank spaces with the appropriate words given within the brackets.

- (a) The short hand representation of an _____ (element/compound) is called symbol.
- (b) The substance/substances which take part in a chemical reaction are called _____ (reactants/products).
- (c) A chemical equation does not tell about _____ (rate/kind) of chemical reaction.
- (d) A symbol represents _____ (1g-atom/1g-molecule) of an element.
- (e) Chemical _____ (symbol/formula) of substance is the symbolic representation of actual number of atoms present in one molecule of a substance.

2. Match the statements in the Column A, with the statements in Column B.

Column A	Column B
(a) 6.023×10^{23} atoms of an element (b) The substances formed during a chemical reaction. (c) A group of negatively or positively charged atoms. (d) The number of hydrogen atoms which combine with one atom of an element. (e) Symbolic representation of a chemical compound	Valency Chemical formula Products 1g-atom Radical

3. (a) What do you understand by the term symbol?
- (b) Define the following radical, atom, molecule, valency and variable valency ?

Language of chemistry DPP 2

- 1.(a) What do you understand by the term “chemical formula”?
(b) What information is conveyed by the formula H_2O ?

2. (a) What do you understand by the term valency ?
(b) Why do certain elements exhibit variable valency ?
(c) Giving at least two examples explain how the ions of the elements having variable valency are named ?

3. (a) What do you understand by the term “chemical equation”?
(b) Why should a chemical equation be always balanced?
(c) State the limitations of a chemical equation.

4. (a) State the valencies and formulae of the following radicals/ions :
(i) Ammonium (ii) Calcium (iii) Ferric (iv) Zinc
(v) Oxide (vi) Hydroxide (vii) Nitride (viii) Cupric
(ix) Stannic (x) Barium. (xi) aluminium (xii) magnesium

5. Write the formulae of the following salts.

- (a) Zinc carbonate (b) Lead hydroxide (c) Sodium nitrate
(d) Potassium zincate (g) Barium chloride (e) Magnesium nitride (f) Ammonium sulphate
(g) Silver chloride (h) Potassium dichromate (I) Calcium bicarbonate
(j) Copper (II) sulphide

11. Write the names of the following compounds.

- (i) $Al_2(SO_4)_3$ (ii) $(NH_4)_2S$ (iii) $KClO_3$ (iv) $KClO$
(v) $Pb(NO_3)_2$ (vi) $Mg(HCO_3)_2$ (vii) $KMnO_4$ (viii) $PbCO_3$
(ix) PbO_2 (x) $Fe(OH)_3$.

Language of chemistry DPP 3

1. Write the formulae of the following acids.

- (i) Carbonic acid (ii) Sulphurous acid (iii) Nitrous acid
(iv) Phosphoric acid (v) Hydrochloric acid (vi) Nitric acid (viii) Hypochlorous acid.
(vii) Sulphuric acid

2. Write the formulae of the following alkalies /bases.

- (i) Ammonium hydroxide (ii) Sodium hydroxide
(iii) Potassium hydroxide (iv) Calcium hydroxide (v) Magnesium hydroxide
(vi) Iron (III) hydroxide.

3. Write the formulae and balance the following equations.

- (a) Zinc + dil. Sulphuric acid \rightarrow Zinc sulphate + Hydrogen.
(b) Ammonium sulphate + Calcium hydroxide \rightarrow Calcium sulphate + Ammonia + Water.
(c) Lead dioxide + Hydrochloric acid \rightarrow Lead chloride + Water + Chlorine.
(d) Aluminium oxide + Sulphuric acid \rightarrow Aluminium sulphate + Water.
(e) Iron + conc. Sulphuric acid \rightarrow Iron (II) sulphate + Sulphur dioxide gas + Water.
(f) Zinc oxide + Nitric acid \rightarrow Zinc nitrate + Water.
(g) Calcium + Water \rightarrow Calcium hydroxide + Hydrogen.
(h) Ferrous sulphate + Sodium hydroxide \rightarrow Ferrous hydroxide + Sodium

4. What do the following symbols denote?

- (i) 2H (ii) H₂ (iii) H⁺

15. Balance the following equations :

