

#### **PRISM WORLD**

# Std.: 9 (English) Science 1

### Chapter: 4

#### Q.1 Name the following

1 Metals with variable valency:

Ans Iron, Copper, Mercury, Tin, Lead

2 Bivalent acidic radicals.

**Ans**  $SO_4^{2-}$ ,  $CO_3^{2-}$ ,  $S^{2-}$ 

3 Trivalent basic radicals.

**Ans** Al<sup>3+</sup>, Fe<sup>3+</sup>, Cr<sup>3+</sup>

4 Composite radicals.

**Ans** MnO<sub>4</sub><sup>-</sup>, NH<sub>4</sub><sup>+</sup>, SO<sub>4</sub><sup>2-</sup>, PO<sub>4</sub><sup>3-</sup>

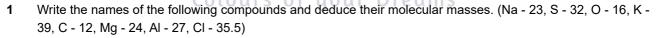
5 Basic radicals.

**Ans** Na<sup>+</sup>, K<sup>+</sup>, Ca<sup>2+</sup>, Mg<sup>2+</sup>

6 Positive radicals

**Ans** Na<sup>+</sup>, K<sup>+</sup>, Ca<sup>2+</sup>, Mg<sup>2+</sup>, Cu<sup>2+</sup>

## Q.2 Solve Numerical problems



- i. CO<sub>2</sub>
- ii. MgCl<sub>2</sub>

Molecular mass  $-12 + (2 \times 16) = 12 + 32 = 44 g$ 

ii. MgCl<sub>2</sub> - Magnesium chloride

Molecular mass  $-24 + (2 \times 35.5) = 24 + 71 = 95 g$ 

- Write the names of the following compound and deduce their molecular masses. (Na 23, S 32, O 16, K 39, C 12, Mg 24, Al 27)
  - i. Na<sub>2</sub>SO<sub>4</sub>
  - ii. K<sub>2</sub>CO<sub>3</sub>

Molecular mass =  $(2 \times 23) + 32 + (16 \times 4) = 46 + 32 + 64 = 142 g$ 

ii.K<sub>2</sub>CO<sub>3</sub> – Potassium carbonate

Molecular mass  $-(2 \times 39) + 12 + (16 \times 3) = 78 + 12 + 48 = 138g$ 

- Write the names of the following compound and deduce their molecular masses. (Na 23, S 32, O 16, K 39, C 12, Mg 24, Al 27)
  - i. NaHCO<sub>3</sub>
  - ii. 32 g oxygen:

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	Densi i. NaHCO <sub>3</sub> – Sodium bicarbonate  Mode Molecular mass – 23 + 1 + 12 + $(3 \times 16)$ = 24 + 12 + 48 = 84 g  ii. Molecular mass of oxygen is 2 × 16 = 32 g  So 32 g oxygen contains 6.022 × $10^{23}$ molecules	
Q.3	Chemical reaction with equation:	10
Q.4	Answer the following.	4
Q.5	Give scientific reasons	2
Q.6	Explain with the help of examples	3
Q.7	Solve Numerical problems	6
Q.8	Extra data (Not to be Use)	35
Q.9	Answer the following in detail	5

