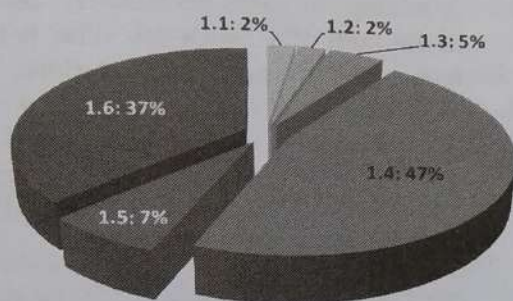


1

Some Basic Concepts of Chemistry

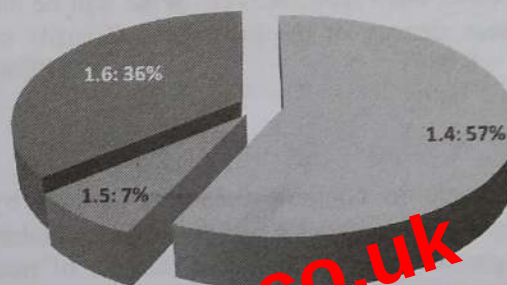
- 1.1 Units of measurement
- 1.2 Uncertainty in measurement
- 1.3 Atomic and molecular masses
- 1.4 Mole concept and molar mass
- 1.5 Percentage composition, empirical and molecular formulae
- 1.6 Chemical reactions, stoichiometry and calculations based on stoichiometry

33 Years NEET/AIPMT Analysis
(Percentage-wise weightage of sub-topics)



■ 1.1 ■ 1.2 ■ 1.3 ■ 1.4 ■ 1.5 ■ 1.6

8 Years NEET Analysis (2013 Onwards)
(Percentage-wise weightage of sub-topics)



■ 1.4 ■ 1.5 ■ 1.6

[Note: Till date no questions have been asked on sub-topics: General Introduction – Importance and scope of chemistry, Laws of chemical combination, Dalton's atomic theory, concept of elements, atoms and molecules]

1.1 Units of measurement

1. The dimensions of pressure are the same as that of _____. [1995]
- (A) force per unit volume
(B) energy per unit volume
(C) force
(D) energy

1.2 Uncertainty in measurement

1. Given the numbers: 161 cm, 0.161 cm, 0.0161 cm. The number of significant figures for the three numbers is _____. [1998]
- (A) 3, 3 and 4 respectively
(B) 3, 4 and 4 respectively
(C) 3, 4 and 5 respectively
(D) 3, 3 and 3 respectively

1.3 Atomic and molecular masses

1. Boron has two stable isotopes, ^{10}B (19%) and ^{11}B (81%). Calculate average at.wt. of boron in the periodic table. [1990]
- (A) 10.8 (B) 10.2
(C) 11.2 (D) 10.0

2. An element, X has the following isotopic composition:

^{200}X : 90 % ^{199}X : 8.0 % ^{202}X : 2.0 %

The weighted average atomic mass of the naturally-occurring element X is closest to [2007]

- (A) 201 amu (B) 202 amu
(C) 199 amu (D) 200 amu

1.4 Mole concept and molar mass

1. 1 cc N_2O at NTP contains _____. [1988]
- (A) $\frac{1.8}{224} \times 10^{22}$ atoms
(B) $\frac{6.02}{22400} \times 10^{23}$ molecules
(C) $\frac{1.32}{224} \times 10^{23}$ electrons
(D) all the above
2. The number of oxygen atoms in 4.4 g of CO_2 is approximately _____. [1990]
- (A) 1.2×10^{23}
(B) 6×10^{22}
(C) 6×10^{23}
(D) 12×10^{23}