

NCERT/CBSE CHEMISTRY CLASS 11 textbook

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Solutions/Answers to NCERT/CBSE CHEMISTRY Class 11(Class XI)textbook

CHAPTER ONE

SOME BASIC CONCEPTS OF CHEMISTRY

1.21 The following data are obtained when dinitrogen and dioxygen react together to

form different compounds :

Mass of dinitrogen Mass of dioxygen

(i) 14 g 16 g

(ii) 14 g 32 g

(iii) 28 g 32 g

(iv) 28 g 80 g

(a) Which law of chemical combination is obeyed by the above experimental data?

Give its statement.

(b) Fill in the blanks in the following conversions:

(i) 1 km = mm = pm

(ii) 1 mg = kg = ng

(iii) 1 mL = L = dm³

1.21.Solution:

(a) Law of chemical combination followed is law of multiple proportions. It states that whenever two elements combine to form two or more compounds, the weights of one of the compounds which combines with a fixed ratio of other, bears a simple ratio to one another.

(b)

(i) 1 km = 10⁶ mm = 10¹⁵ pm

(ii) 1 mg = 10⁻⁶ kg = 10⁶ ng

(iii) 1 ml = 10⁻³ L = 10⁻⁶ dm³