# Worksheet: Some Basic Concepts of Chemistry

West Bengal State Board · Class 11 · Chemistry · 5 questions · 15 marks

Name: _____ Date: _____ Score: _____ / 15

**Q1.** Calculate the mass of 0.5 moles of $CaCO_3$ (Ca = 40, C = 12, O = 16). *[2 marks]*

**Q2.** A compound contains 92.3% C and 7.7% H by mass. Find its empirical formula. If its vapour density is 13, find the molecular formula. *[5 marks]*

**Q3.** How many grams of $O_2$ are needed to completely burn 24 g of $CH_4$? *[3 marks]*

**Q4.** Why is molarity temperature-dependent but molality is not? *[2 marks]*

**Q5.** 2 g $H_2$ reacts with 16 g $O_2$ to form water. Find the limiting reagent and the mass of water formed. *[3 marks]*