

## Worksheet: Some Basic Concepts of Chemistry

NIOS · Class 11 · Chemistry · 5 questions · 15 marks

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Score: \_\_\_\_\_ / 15

**Q1.** Calculate the mass of 0.5 moles of  $\text{CaCO}_3$  (Ca = 40, C = 12, O = 16). [2 marks]

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**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]

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**Q3.** How many grams of  $\text{O}_2$  are needed to completely burn 24 g of  $\text{CH}_4$ ? [3 marks]

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

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**Q5.** 2 g  $\text{H}_2$  reacts with 16 g  $\text{O}_2$  to form water. Find the limiting reagent and the mass of water formed. [3 marks]

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