

**AS Level Chemistry B**  
**H033/01** Foundations of chemistry

**Question Set 9**

Multiple Choice Questions

1 How many hydrogen atoms are there in 1 mol of methanol?

- A 3
- B 4
- C  $1.8 \times 10^{24}$
- D  $2.4 \times 10^{24}$

Your answer

[1]

2  $\text{CuCO}_3 \rightarrow \text{CuO} + \text{CO}_2$

0.618 g of copper carbonate ( $M_r = 123.5$ ) is heated.

What is the volume of  $\text{CO}_2$  produced at room temperature and pressure?

- A  $120 \text{ cm}^3$
- B  $1.2 \text{ dm}^3$
- C  $240 \text{ cm}^3$
- D  $12 \text{ dm}^3$

Your answer

[1]

3 What is the percentage of chlorine by mass in magnesium chloride?

- A 59%
- B 66%
- C 74%
- D 75%

Your answer

[1]

4  $35 \text{ cm}^3$  of a solution has a concentration of  $0.125 \text{ mol dm}^{-3}$ .

A student calculates the amount (in moles) of solute in this solution. Which

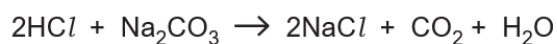
answer is given to the appropriate number of significant figures?

- A  $4.37 \times 10^{-3}$
- B  $4.375 \times 10^{-3}$
- C  $4.38 \times 10^{-3}$
- D  $4.4 \times 10^{-3}$

Your answer

[1]

- 5 Hydrochloric acid reacts with sodium carbonate as shown in the equation.



20 cm<sup>3</sup> of 2.0 mol dm<sup>-3</sup> Na<sub>2</sub>CO<sub>3</sub> are added to 20 cm<sup>3</sup> 2.0 mol dm<sup>-3</sup> HCl. What mass of CO<sub>2</sub> (in g) is produced?

- A 0.88
- B 1.76
- C 22
- D 1760

Your answer

[1]

- 6 Urea has formula CO(NH<sub>2</sub>)<sub>2</sub>.

What is the percentage of nitrogen by mass in urea?

- A 23%
- B 25%
- C 41%
- D 47%

Your answer

[1]

**Total Marks for Question Set 9: 6**

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