OCR
Oxford Cambridge and RSA

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 1.8×10^{24}

D 2.4×10^{24}

Your answer ☐

[1]

2 $CuCO_3 \rightarrow CuO + CO_2$

0.618 g of copper carbonate (M_r = 123.5) is heated.
What is the volume of CO_2 produced at room temperature and pressure?

A 120 cm^3

B 1.2 dm^3

C 240 cm^3

D 12 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 cm^3 of a solution has a concentration of 0.125 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 4.37×10^{-3}

B 4.375×10^{-3}

C 4.38×10^{-3}

D 4.4×10^{-3}

Your answer ☐

[1]

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

$$2HCl + Na_2CO_3 \rightarrow 2NaCl + CO_2 + H_2O$$

20 cm^3 of 2.0 mol dm^{-3} Na_2CO_3 are added to 20 cm^3 2.0 mol dm^{-3} HCl. What mass of CO_2 (in g) is produced?

A 0.88

B 1.76

C 22

D 1760

Your answer ☐

[1]

6 Urea has formula $CO(NH_2)_2$.

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