NO:	FINDING MASS-SET-1
1	Sodium hydrogencarbonate undergoes thermal decomposition as shown. $2NaHCO_3 \rightarrow Na_2CO_3 + CO_2 + H_2O$ What is the maximum mass of sodium carbonate that can be made from 0.100 moles of sodium hydrogencarbonate? **A** 4.15 g **B** 5.30 g **C** 10.6 g **D** 21.2 g
Ms-1	**B**
2	The equation for the reaction between calcium carbonate and dilute nitric acid is shown. $CaCO_3(s) + 2HNO_3(aq) \rightarrow Ca(NO_3)_2(aq) + CO_2(g) + H_2O(l)$ 25 g of calcium carbonate is reacted with an excess of dilute nitric acid. Which mass of calcium nitrate and which volume of carbon dioxide is produced at room temperature and pressure?

	mass of calcium nitrate / g	volume of carbon dioxide / dm^3
A	29	6
B	29	12
C	41	6
D	41	12

Ms-2	C
3	Which gas sample has the greatest mass? **A** 5.0 moles of Cl_2 **B** 10.0 moles of O_2 **C** 15.0 moles of N_2 **D** 20.0 moles of H_2
Ms-3	C

4	A solution of sodium carbonate, Na_2CO_3, has a concentration of $0.03\,mol/dm^3$. Which mass of sodium carbonate is dissolved in $1\,dm^3$ of this solution? **A** 1.06 g **B** 3.18 g **C** 10.60 g **D** 31.80 g
Ms-4	B
5	Water is formed when 48 g of oxygen combine with 6 g of hydrogen. What mass of oxygen combines with 2 g of hydrogen? **A** 12 g **B** 16 g **C** 96 g **D** 144 g
Ms-5	B
6	The equation for the reaction between magnesium and dilute sulfuric acid is shown. $Mg + H_2SO_4 \rightarrow MgSO_4 + H_2$ M_r of $MgSO_4$ is 120 Which mass of magnesium sulfate will be formed if 12 g of magnesium are reacted with sulfuric acid? **A** 5 g **B** 10 g **C** 60 g **D** 120 g
Ms-6	C
7	The equation shows the reaction between magnesium and sulfuric acid. $Mg + H_2SO_4 \rightarrow MgSO_4 + H_2$ (Mg = 24, H = 1, S = 32, O = 16) In this reaction, what mass of magnesium sulfate will be formed when 6 g of magnesium reacts with excess sulfuric acid? **A** 8 **B** 24 **C** 30 **D** 60
Ms-7	C

8	Carbon monoxide burns in oxygen to produce carbon dioxide. $2CO(g) + O_2(g) \rightarrow 2CO_2(g)$ Which mass of carbon dioxide is produced from 14 g of carbon monoxide? **A** 22 g **B** 28 g **C** 44 g **D** 88 g
Ms-8	A
9	The relative formula mass, M_r, of copper(II) sulfate, $CuSO_4$, is 160. Which mass of sulfur is present in 160 g of copper(II) sulfate? **A** 16 g **B** 32 g **C** 64 g **D** 128 g
Ms-9	B
10	Sodium hydrogencarbonate undergoes thermal decomposition as shown. $2NaHCO_3 \rightarrow Na_2CO_3 + CO_2 + H_2O$ What is the maximum mass of sodium carbonate that can be made from 0.100 moles of sodium hydrogencarbonate? **A** 4.15 g **B** 5.30 g **C** 10.6 g **D** 21.2 g
Ms-10	B