CHOOSE THE CORRECT ANSWER

NO	QUESTION	ANSWER
1	Select the compound in which sulphur has the highest oxidation number	A. SO_2 B. H_2SO_3 C. SCl_2 D. Na_2SO_4
2	Adipic acid, $H_2C_6H_8O_4$, is produced by a reaction between cyclohexane and excess oxygen. The equation for the reaction is: $2C_6H_{12}(l) + 5O_2(g) \rightarrow 2H_2C_6H_8O_4(l) + 2H2O(l)$ If 45.0 g of cyclohexane is used, calculate the theoretical yield of the adipic acid.	A. 73.8 g C. 75.8 g B. 83.7 g D. 78.3g
3	The oxidation number of vanadium atom in $(NH_4)_3VO_4$ is	A. +3 B. +4 C. +5 D. +7
4	A 72.0 g vanadium pentoxide, V_2O_5, reacts with excess aluminium, Al at high temperature to produce vanadium metal, and aluminium oxide, Al_2O_3. Calculate the mass vanadium produced. [Ar V: 51]	A. 4.04 g C. 44.0 g B. 40.4 g D. 4.40 g
5	Antimony can react with chlorine gas to give antimony trichloride. __Sb(s) + __ Cl2(g) $\longrightarrow$ ___SbCl3(l) Which of the following is the most correct set of stoichiometric coefficients to balance this equation?	A. 1, 1, 1 B. 4, 6, 4 C. 1, 3, 2 D. 2, 3, 2

6	. In an experiment, 1.46 g of magnesium is added into 160.00 mL 0f 0.50 mol L^{-1} hydrochloric acid. The reaction involved is: $Mg(s) + 2HCl(aq) \rightarrow MgCl_2(aq) + H_2(g)$ Determine the limiting reactant.	A. Mg(s) B. HCl (aq)	C. MgCl$_2$ (aq) D. H$_2$(g)
7	Given equations below: $S_2O_8^{2-} + 2e \rightarrow 2SO_4^{2-}$ $Mn^{2+} + 4H_2O \rightarrow MnO_4^- + 8H^+ + 5e$ How many mole of $S_2O_8^{2-}$ are needed to oxidise 20mL, 0.2 M Mn^{2+}?	A. 4×10^{-3} mol B. 1×10^{-3} mol	C. 1×10^{-2} mol D. 2×10^{-2} mol
8	In an experiment, 30g aluminium reacts with 100g Br$_2$ to form aluminium bromide, AlBr$_3$. What is the percentage yield for the reaction if only 55g of AlBr$_3$ were produced at the end of the experiment?	A. 18.57 % B. 20.22%	C. 49.45% D. 42.30%
9	. A 25 mL solution containing $C_2O_4^{2-}$ ions was titrated with KMnO$_4$ in acidic medium as follow: $5C_2O_4^{2-} + 2MnO_4^- + 16H^+ \rightarrow 2Mn^{2+} + 8H_2O + 10CO_2$ Calculate the concentration of $C_2O_4^{2-}$ ions if the titration required 30.50 mL of 1.25 M KMnO$_4$ solution.	A. 3.81 M B. 3.32 M	C. 4.23 M D. 4.78 M
10	The reaction between sulphuric acid, H$_2$SO$_4$ and barium hydroxide, Ba(OH)$_2$ is shown below $H_2SO_4 + Ba(OH)_2 \rightarrow BaSO_4 + 2H_2O$ Calculate the mass of Ba(OH)$_2$ required to produce 4.35g BaSO$_4$, if the percentage yield of the reaction is 85%.	A. 3.75 g B. 6.97 g	C. 3.48 g D. 5.12 g