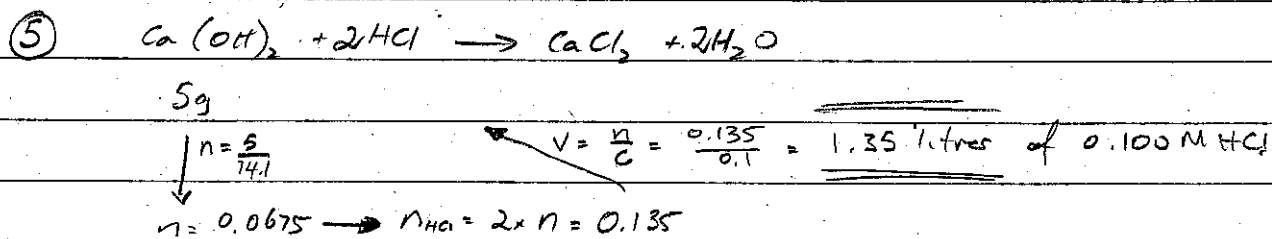
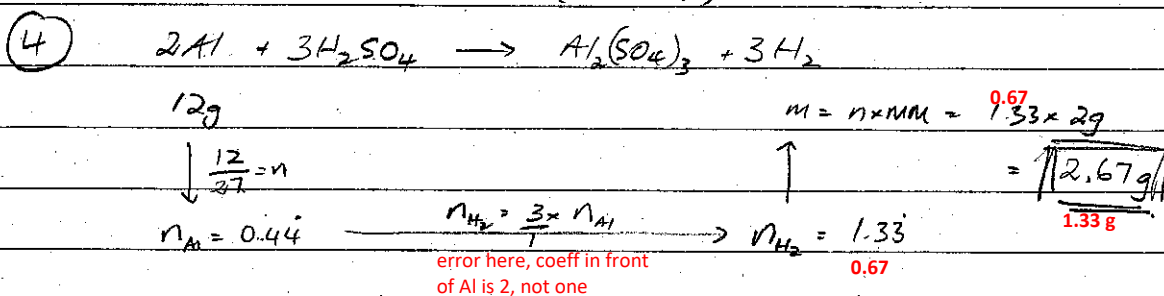


Revision Questions (ANSWERS)

① d.

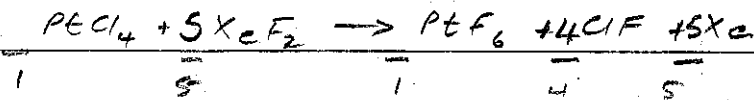
② b $n = \frac{m}{MM} = \frac{17}{17} = 1 \text{ mole}$ $C = \frac{n}{V} = \frac{1}{1.2} = 0.832$

③ No. 1st solution, conc = 1.0M, 2nd solution is lower as adding solute to 1 litre of solvent would increase the volume to > 1 litre, thus reducing conc. ($C = \frac{n}{V}$)

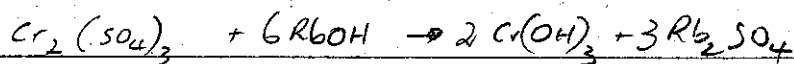


⑥ (b) First two zeros are not sig as they are place setters.

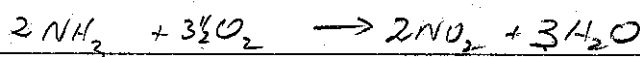
⑦ (a) 16



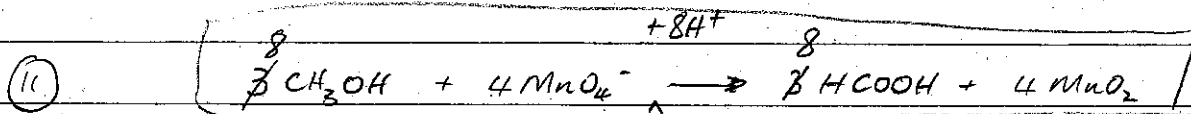
⑧ (b) 12



⑨ (d) 7



(10) (e) 3 moles of H_2 would produce 2 moles of NH_3 , or 34g not 17.



NOTE equation is NOT balanced correctly, but has coefficients so assume error on examiners part. In exam use the equation as written (even though it is wrong)



12g

$$n = \frac{12}{32}$$

$$n_{CH_3OH} = 0.375$$

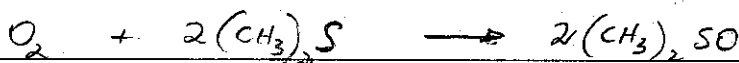
$$n_{HCOOH} = \frac{3}{3} \times n$$

$$n_{HCOOH} = 0.375$$

$$m = n \times MM = 0.375 \times 46$$

$$= \underline{\underline{17.25g}}$$

(12)



50g

75g

$$n = \frac{50}{32}$$

$$n = \frac{75}{62}$$

$$n_{O_2} = 1.56$$

$$n_{(CH_3)_2S} = 1.21$$

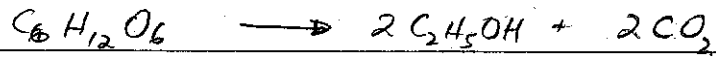
Limiting Reagent Comparison	$O_2: \frac{1.56}{1} = 1.56$	$(CH_3)_2S: \frac{1.21}{2} = 0.605$
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$(CH_3)_2S$ is limiting reagent

$$n_{(CH_3)_2SO} = \frac{2}{2} \times n_{(CH_3)_2S} = 1 \times 1.21 = 1.21$$

$$\begin{aligned} \text{mass of } (CH_3)_2SO &= n \times MM \\ &= 1.21 \times 78g \\ &= \underline{\underline{94.4g}} \end{aligned}$$

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$$\boxed{\text{mass} = 100.8\text{g}}$$

$$m = n \times \text{MM}$$

$$51.5\text{g}$$

$$n = \frac{51.5}{46}$$

$$n_{\text{C}_6\text{H}_{12}\text{O}_6} = 0.56 \quad n = \frac{1}{2} \times n_{\text{C}_2\text{H}_5\text{OH}} \quad n_{\text{C}_2\text{H}_5\text{OH}} = 1.12$$

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(d) limiting reagent limits the progress of the reaction by being used up first, or in other words "consumed completely".