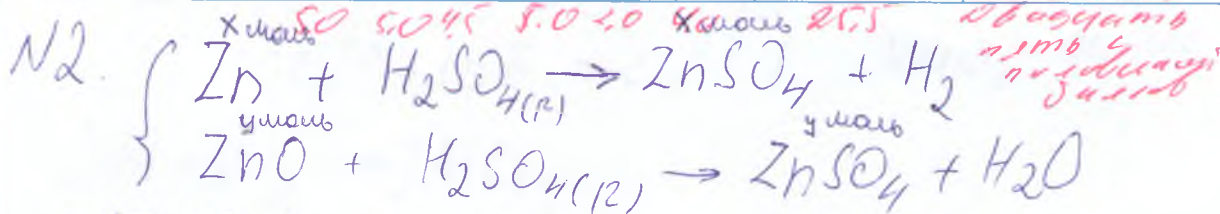


Класс 10 Вариант 4 Дата Олимпиады 24.02.18

Площадка написания ТИУ

Задача	1	2	3	4	5	6	Σ		Подпись
							Цифрой	Прописью	
Оценка	5,0	5,0	4,5	5,0	2,0	4,0	25,5	двадцать пять с половиной баллов	



$$n(\text{ZnSO}_4) = \frac{m}{M} = \frac{32,22}{161,2} = 0,2 \text{ моль}$$

$$\begin{cases} x + y = 0,2 \\ 65x + 81y = 14,6 \end{cases} \quad x = 0,2 - y$$

$$65(0,2 - y) + 81y = 14,6$$

$$13 - 65y + 81y = 14,6$$

$$13 - 65y + 81y = 14,6$$

$$y = 0,1 \text{ моль}$$

$$x = 0,1 \text{ моль}$$

$$m(\text{Zn}) = n \cdot M = 0,1 \text{ моль} \cdot 65 \frac{\text{г}}{\text{моль}} = 6,52$$

$$m(\text{ZnO}) = n \cdot M = 0,1 \text{ моль} \cdot 81 \frac{\text{г}}{\text{моль}} = 8,12$$

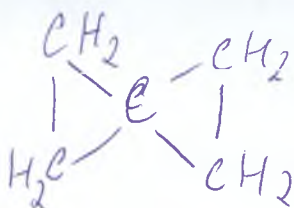
$$m_{\text{см}} = m(\text{Zn}) + m(\text{ZnO}) = 6,52 + 8,12 = 14,62$$

$$w(\text{Zn}) = \frac{m(\text{Zn})}{m_{\text{см}}} = \frac{6,52}{14,62} = 44,52 \%$$

$$w(\text{ZnO}) = 100\% - 44,52\% = 55,48\%$$

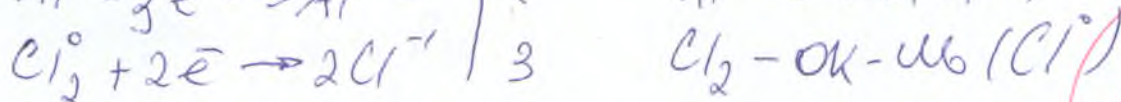
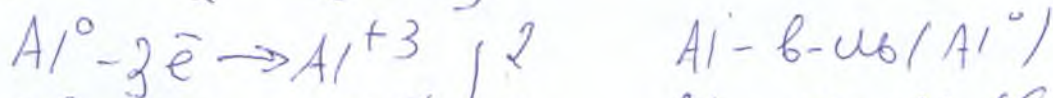
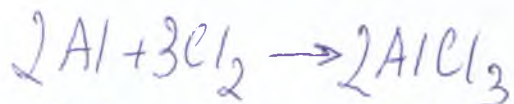
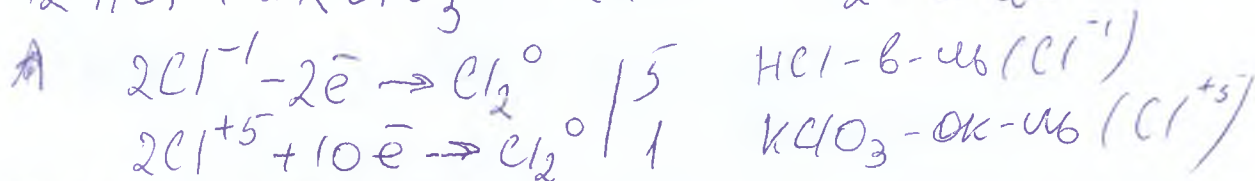
$$\text{Ответ: } w(\text{Zn}) = 44,52\% ; w(\text{ZnO}) = 55,48\%$$

N6.



описание?

40

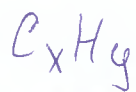


5,0



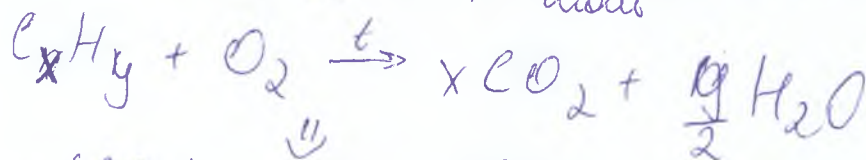
$$N4. \quad n(\text{CO}_2) = n(\text{C}) = \frac{V}{V_m} = \frac{20 \text{ л}}{22,4 \frac{\text{л}}{\text{моль}}} = 0,893 \text{ моль}$$

$$n(\text{H}) = 2n(\text{H}_2\text{O}) = \frac{m}{M} \cdot 2 = \frac{12,0552}{18 \frac{\text{г}}{\text{моль}}} \cdot 2 = 1,34 \text{ моль}$$



$$x:y = 0,893:1,34 = 1:1,5 = \text{CH}_{1,5} - \text{гидрокарбон}$$

$$n(\text{C}_x\text{H}_y) = \frac{V}{V_m} = \frac{5 \text{ л}}{22,4 \frac{\text{л}}{\text{моль}}} = 0,223 \text{ моль}$$



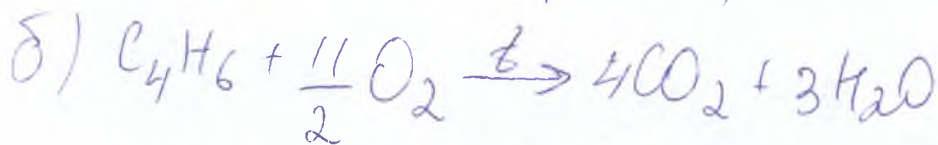
$$\frac{n(\text{CO}_2)}{n(\text{C}_x\text{H}_y)} = x = \frac{0,893 \text{ моль}}{0,223 \text{ моль}} = 4 \Rightarrow \text{C}_4\text{H}_6 - \text{алкен}$$

стр. 2

N4 a) $w(C) = \frac{m(C) \cdot 100\%}{m(C_4H_6)} = \frac{418 \cdot 100\%}{54} = 88,89\%$

$w(H) = 100\% - 88,89\% = 11,11\%$

Даны: $w(C) = 88,89\%$, $w(H) = 11,11\%$

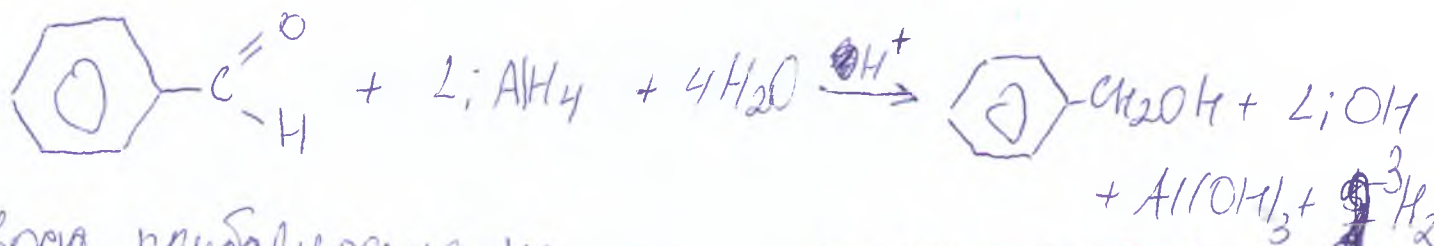


$n(O_2) = 5,5$ $n(C_4H_6) = 5,5 \cdot 0,223 \text{ моль} = 1,227 \text{ моль}$

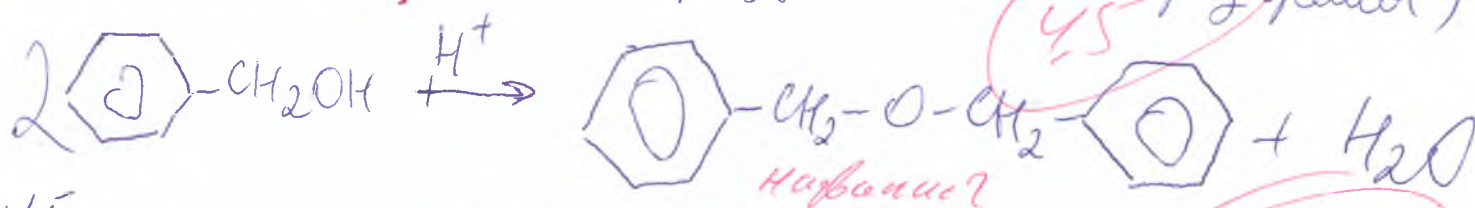
$V(O_2) = n \cdot V_m = 1,227 \text{ моль} \cdot 22,4 \frac{\text{л}}{\text{моль}} = 27,48 \text{ л}$

Даны: 27,48 л

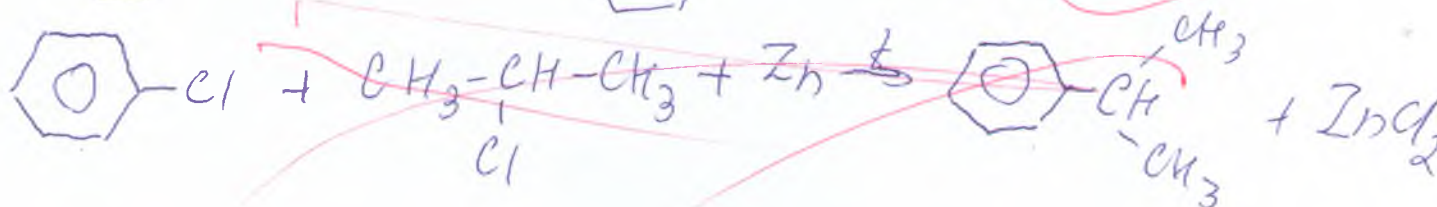
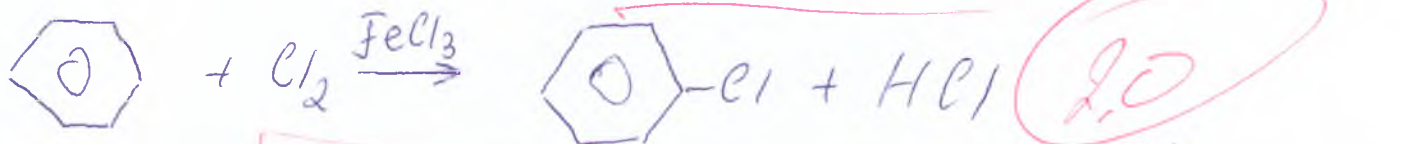
N3



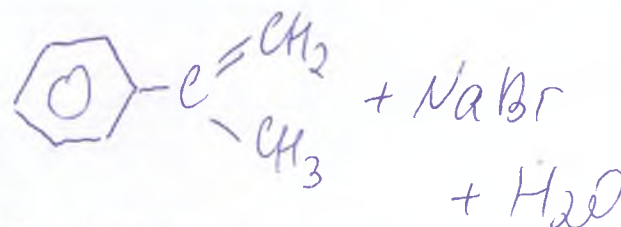
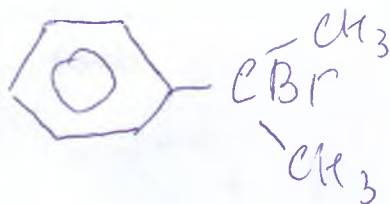
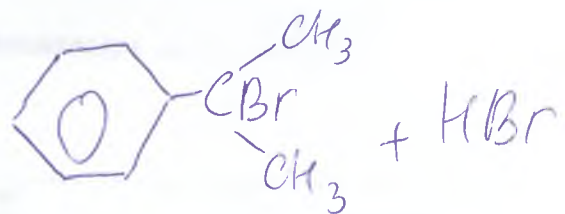
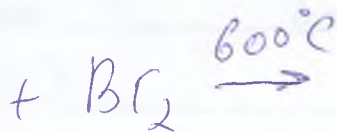
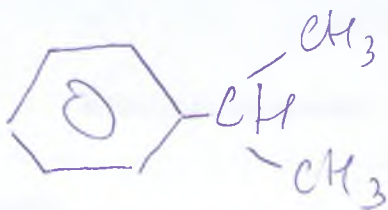
(вода прибавляется не сразу, а только через время)



N5



N5



~~пропенил 2-бензол~~
вторичный бензол