

Общий балл	Дата	Ф.И.О. Жюри	Подпись
45,5	14.03.25	Федултово	<i>[Signature]</i>
Шифр			919422

1 1 2 3 4 5
9,5 16,5 14 15,5 -

10-1.

1.) A - Cl_2O , B - Cl_2O_3 , C - Cl_2O_6 , D - Cl_2O_7 , X - Cl

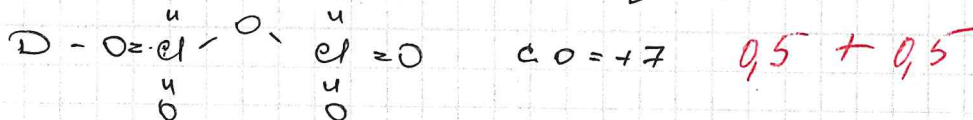
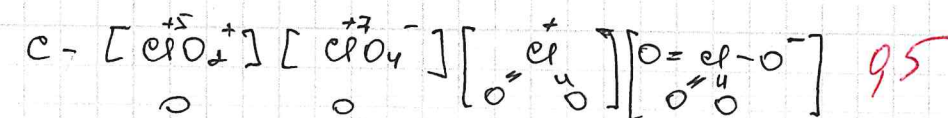
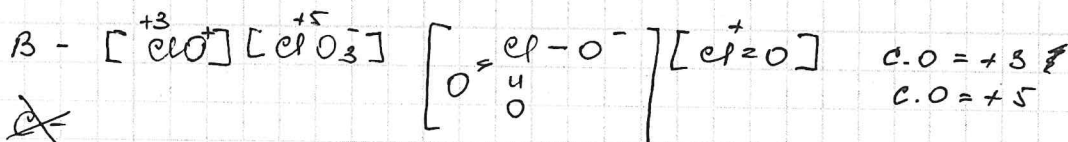
3,5

$$\omega_1 = \frac{1}{4,44} = \frac{16}{16 + M(x)} \Rightarrow M(x) = 71 \quad n = 2 \quad M(\text{Cl}) \rightarrow A - \text{Cl}_2\text{O}$$

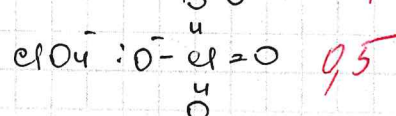
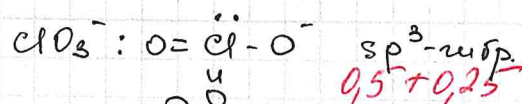
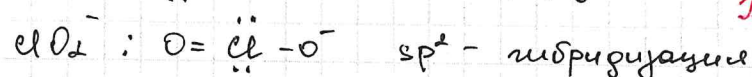
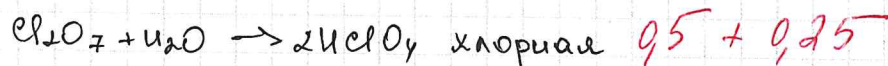
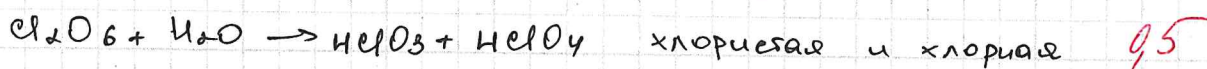
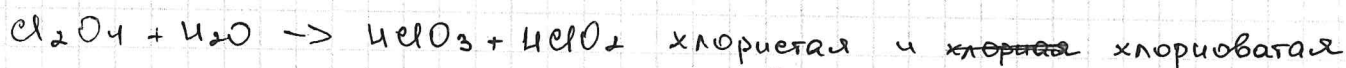
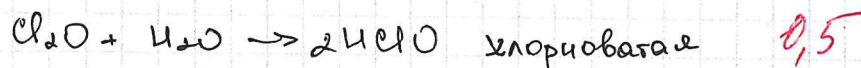
$$\omega_2 = \frac{4}{4,44 + 4} = \frac{16n}{16n + 35,5} \Rightarrow n = 2 \Rightarrow B - \text{Cl}_2\text{O}_3$$

$$\omega_3 = \frac{6}{4,44 + 4} = \frac{16n}{16n + 35,5} \Rightarrow n = 3 \Rightarrow C - \text{Cl}_2\text{O}_6, \text{ но хлор не образует } \text{Cl}_2\text{O} + 6 \Rightarrow C - \text{Cl}_2\text{O}_6$$

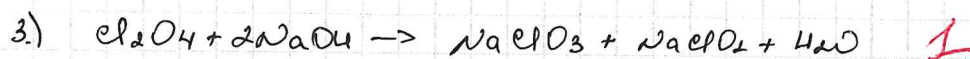
$$\omega_4 = \frac{7}{4,44 + 4} = \frac{16n}{16n + 35,5} \Rightarrow n = 3,5 \Rightarrow D - \text{Cl}_2\text{O}_7$$



2.) E - HClO , F - HClO_4 , H - HClO_2 , I - HClO_3



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$$n(\text{Cl}_2\text{O}_4) = \frac{4,48}{22,4} = 0,2 \text{ моль}$$

$$n(\text{NaOH}) = \frac{80 \cdot 1,1308 \cdot 0,12}{40} = \frac{1,221372}{40} \approx 0,305 \text{ моль}$$

$$m_{\text{p-p}} = 0,2 \cdot 135 + 1,1308 \cdot 80 = 128,78 \text{ г.}$$

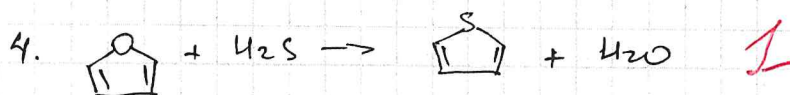
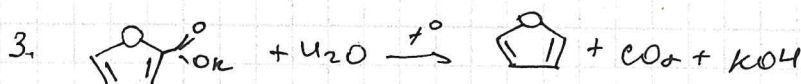
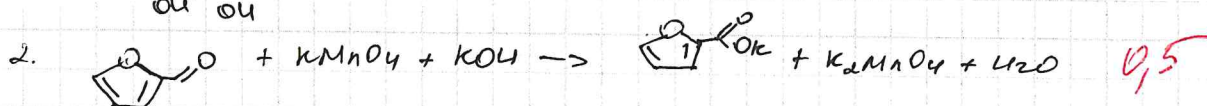
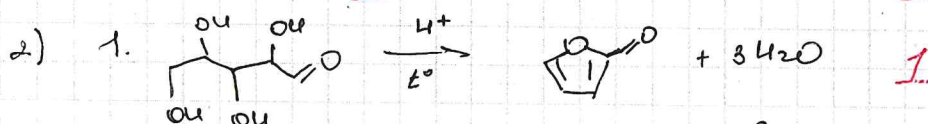
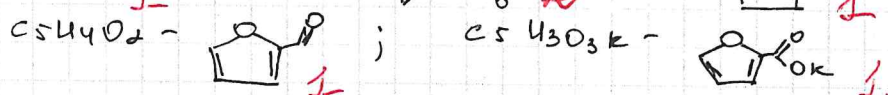
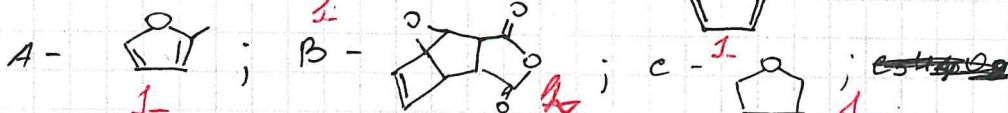
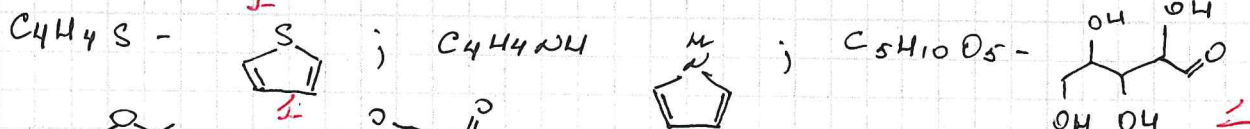
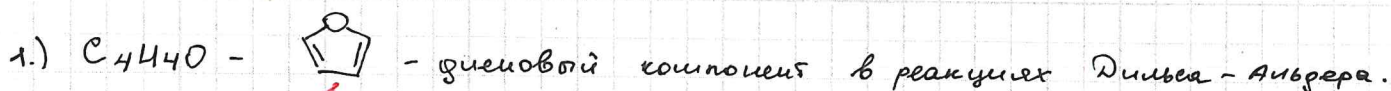
$$m(\text{NaClO}_3) = \frac{0,305}{2} \cdot 106,5 = 16,24 \text{ г.}$$

$$m(\text{NaClO}_2) = \frac{0,305}{2} \cdot 90,5 = 13,8 \text{ г.}$$

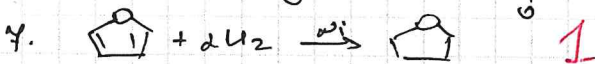
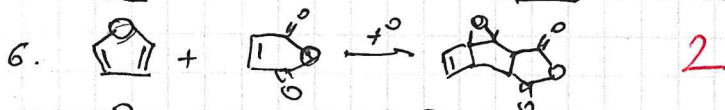
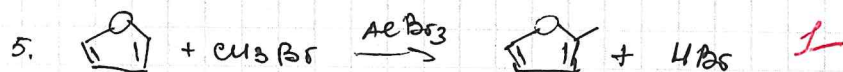
$$\omega(\text{NaClO}_3) = \frac{16,24}{128,78} = 0,126 \cdot 100\% = 12,6\%$$

$$\omega(\text{NaClO}_2) = \frac{13,8}{128,78} = 0,107 \cdot 100\% = 10,7\%$$

10-2.

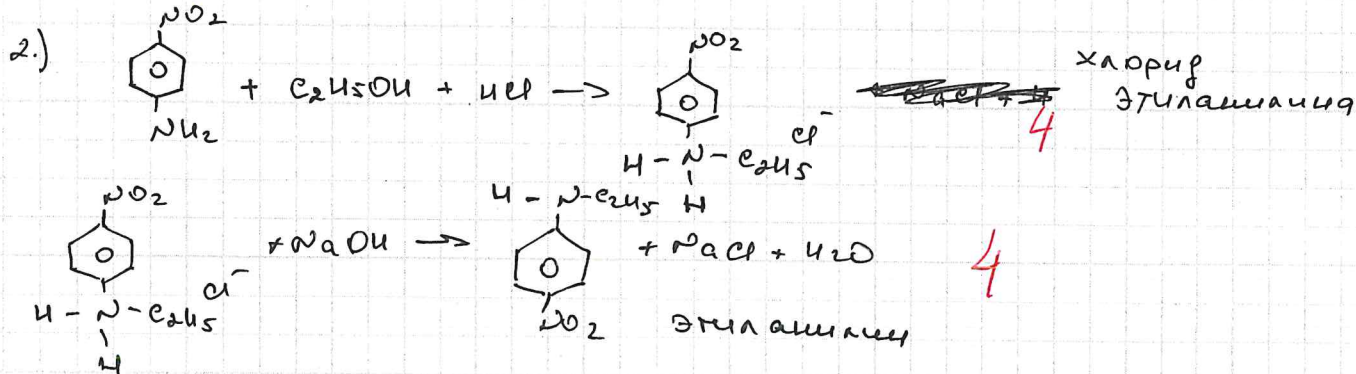
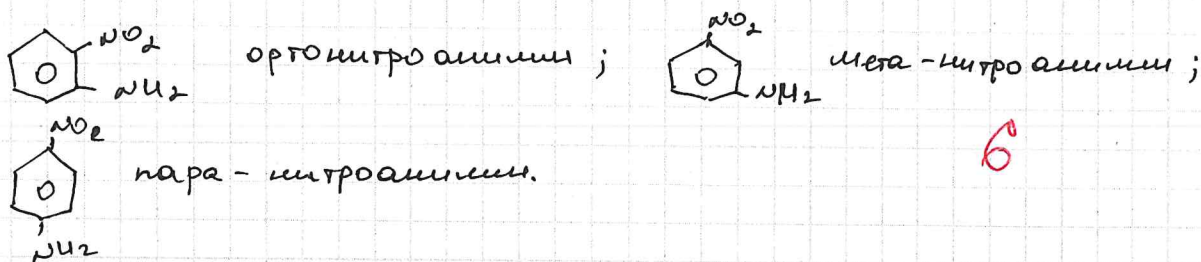


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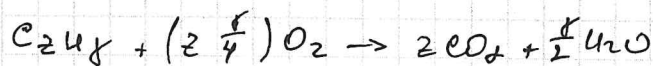
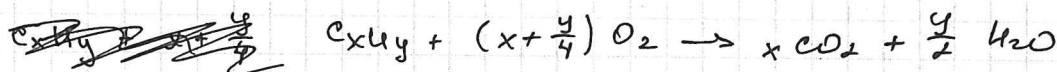
10-3.

1.) C6H6 и H2O2 нитроамини



10-4.

1) $n_{общее} = \frac{PV}{RT} = \frac{491,3 \cdot 8}{8,314 \cdot 473,15} \approx 1 \text{ моль}$ 0,5



4 + 1

Угтем, что на парциальное давление CO2 не влияет состав смеси $\Rightarrow$
 $\Rightarrow x = 2 \Rightarrow 3,14 = \frac{44x \cdot n + 18z \cdot (1-n)}{n \cdot (44x + 18) + (1-n) \cdot (12z + 2)}$, n - мольная доля CxHy

В производстве в-в большой применение находит CH3COOH (ацетичен). У условия задачи очевидно, что более темп-та углеводород CH3-CO-CH3 (ацетон), т.к. $x = 2, z = 2, y = 2, \delta = 6$.
и $n = 0,484$