

Общий балл	Дата	Ф.И.О. Жюри	Подпись
50,25	14.03.25	Файтлова	<i>[Signature]</i>
Шифр			

Задача 10-1

1 2 3 4 5
13,25 17,5 14 5,5 -

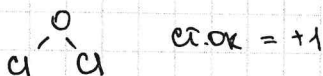
1) $\omega_{O_1} = \frac{1}{4,44} = \frac{16}{16 + M(x)} \Rightarrow M(x) = 7n - 2M(Cl) \Rightarrow \text{окисл. } Cl_2O - A$

B: $\frac{4}{4,44 + 4} = \frac{16n}{16n + 35,5} \Rightarrow n = 2 \Rightarrow B - ClO_2$

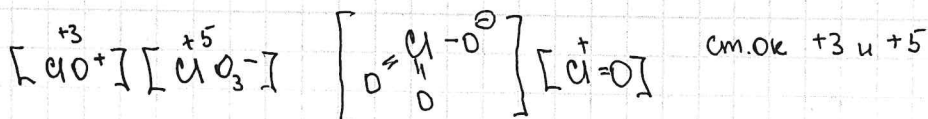
C: $\frac{6}{4,44 + 6} = \frac{16n}{16n + 35,5} \Rightarrow n = 3 \Rightarrow C - ClO_3$, но с.о + 6 у хлора нет $\Rightarrow$
 $C - Cl_2O_6$

D: $\frac{7}{7 + 4,44} = \frac{16n}{16n + 35,5} \Rightarrow n = 3,5 \Rightarrow D - Cl_2O_7$

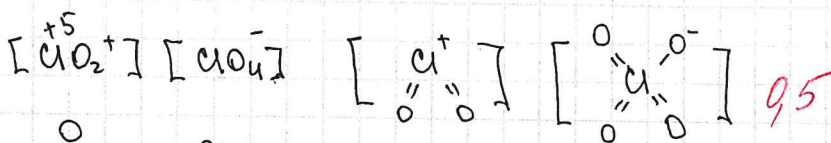
Итого: A = Cl_2O



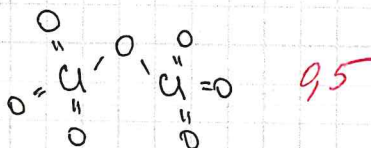
B = Cl_2O_4



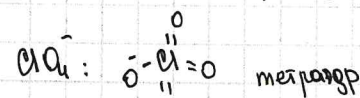
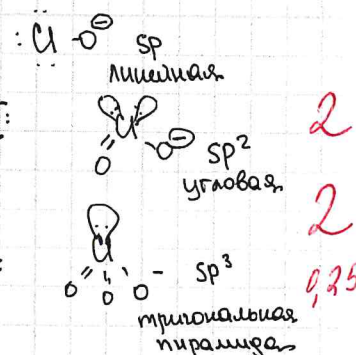
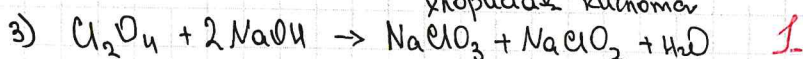
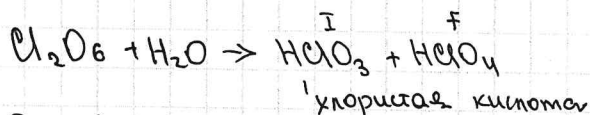
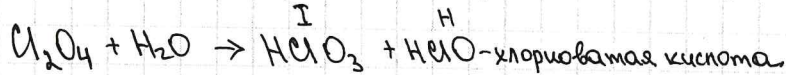
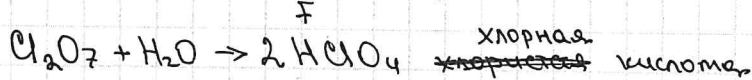
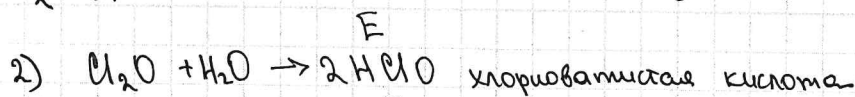
C = Cl_2O_6



D = Cl_2O_7



X = Cl



$n(Cl_2O_4) = \frac{4,48}{22,4} = 0,2 \text{ моль}$ - избыток.

$n(NaOH) = \frac{90 \cdot 1,1309 \cdot 0,12}{40} = 0,305 \text{ моль}$ - недостаток.

$m_{p-p} = 0,2 \cdot 135 + 90 \cdot 1,1309 = 128,78 \text{ г}$

$m(NaClO_3) = \frac{0,305}{2} \cdot 106,5 = 16,24 \text{ г}$

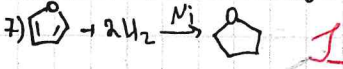
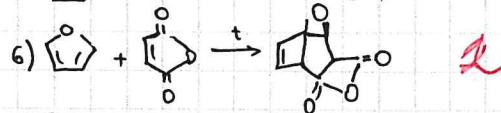
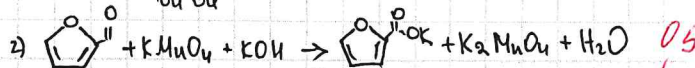
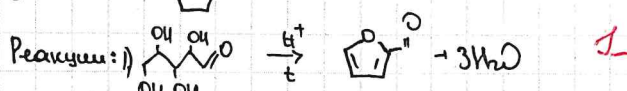
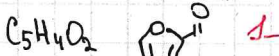
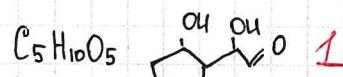
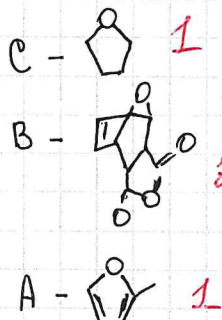
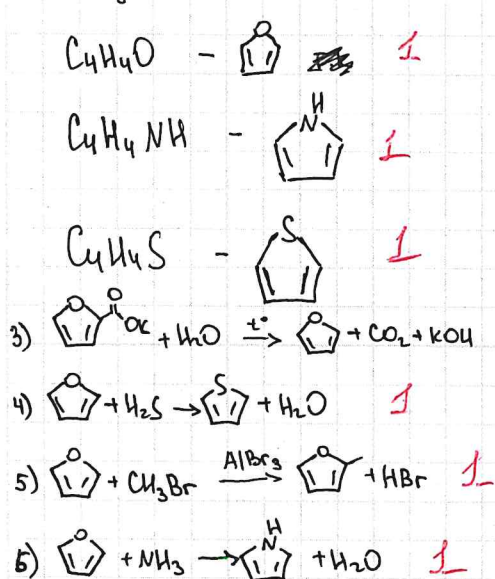
$m(NaClO_2) = \frac{0,305}{2} \cdot 90,5 = 13,8 \text{ г}$

$\omega(NaClO_3) = \frac{16,24}{128,78} = 0,126 = 12,6\%$

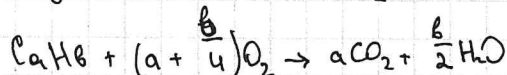
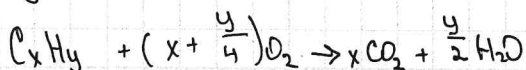
$\omega(NaClO_2) = \frac{13,8}{128,78} = 0,107 = 10,7\%$

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Задача 10-2



Задача 10-4.



$3,14 = \frac{44x \cdot n + 44a \cdot (1-n)}{n \cdot (12x-y) + (1-n)(12a+b)}$

$\Rightarrow a=x$

вероятно газ C_2H_2 -ацетилен $\Rightarrow C_2H_4$ и C_2H_6

$\left. \begin{array}{l} \text{при } x=2 \\ y=2 \\ b=4 \\ n < 0 \end{array} \right\} \text{нет}$

$\left. \begin{array}{l} \text{при } x=a=2 \\ y=2 \\ b=6 \\ n=0,494 \end{array} \right\} \Rightarrow \begin{array}{l} C_2H_2 (HC \equiv CH) \\ C_2H_6 (H_3C-CH_3) \end{array}$

5,5

Задача 10-3.

