

(V1) $n(\text{Ca}) = \frac{25,95}{22,4} = 1,158 \text{ моль} \approx 1,16 \text{ моль}$

$$\begin{cases} x + y = 1,16 \\ (x - 19,44) + (y + 28,43) = 29,2 \end{cases} \quad \begin{cases} y = 1,16 - x & y = 1,16 - 38 \cdot y = 37 \\ 1,16 - y - 19,44 + y + 28,43 = 29,2 \end{cases}$$

~~$2y = 29,2 - 1,16$~~

~~$x - 19,44 - (1,16 - x + 28,43) = 29,2$~~

$38 - 19,44 = 18,56 \text{ моль}$

$37 + 28,43 = 65,43$

$w_1 = \frac{18,56}{29,2} \cdot 100\% = 63,5$

$w_2 = 100 - 63,5 = 36,5$

$x - 19,44 + 1,16 + x - 28,43 = 29,2$

$2x = 29,2 + 19,44 - 1,16 + 28,43$

$2x = 75,91$

$x = 38$

V2 $m = 1,185 \cdot 1 = 1,185 \text{ г}$

$M(\text{KOH}) = 59 + 1 + 16 = 76 \text{ г/моль}$

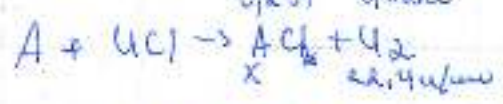
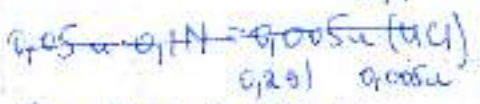
$n(\text{KOH}) = \frac{1,185}{76} = 0,0156 \text{ моль}$

$V = 0,0156 \cdot 22,4 = 0,349 \text{ л}$

$0,349 \cdot 0,25 = 0,087 \text{ моль}$

(V3)

$50 \text{ моль} = 0,05 \text{ моль} \quad \frac{0,05}{0,1} = 0,5 \cdot 0,1 = 0,05$



(V3) 3. $\text{pH} = 0,1 \text{ M}$
 10^{-1}

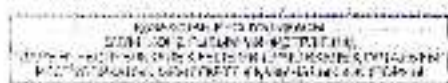
$x = \frac{0,291 \cdot 22,4}{0,005 \cdot 0,05} = 130 \text{ г/моль}$

A - Mg

$w(\text{Cl}_2) = \frac{0,291}{71} = 0,409\%$

V4 $3,45 \text{ г/л} \cdot 10 = 34,5 \text{ г}$

$n = \frac{3,45}{22,4} = 0,154 \text{ моль}$



N3.



50ml	x
2,200ml	1,000ml
22,4, / 200ml	22,4, / 200ml
11,8ml	22,4ml

Exp:
 $m(Mg) = 0,291$
 $V(HCl) = 50ml$
 $c(HCl) = 0,1M$
 $n_1 = \frac{m(Mg)}{M_r(Mg)} = \frac{0,291}{24} = 0,0121$

$\frac{50}{44,8} = \frac{x}{22,4}$ $x = \frac{50 \cdot 22,4}{44,8} = 25ml$

$T(k) m(MgCl_2) = ?$
 $2) V(MgCl_2) = ?$
 $n_2 = \frac{V(HCl)}{c(HCl)} = \frac{50}{0,1} = 500$



2,000ml	1,000ml
22,4, / 200ml	950, / 200ml
44,8ml	952

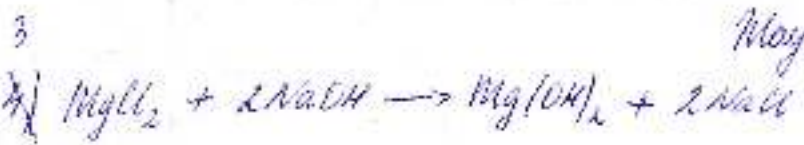
Маябаы: $m(MgCl_2) = 106g$
 $V(MgCl_2) = 25ml$

$\frac{50ml}{44,8ml} = \frac{x}{952}$ $x = \frac{50ml \cdot 952}{44,8ml} = 106g$



1) ~~A шими~~ - $MgCl_2$
 $m(MgCl_2) = 106g$
 $T(k) W(Cl_2) = ?$

Мәнімі: $106g - 100\%$
 $M_r(Cl_2) = 71$ $71g - x$
 $x = \frac{71 \cdot 100}{106} = 66,9\%$



Маябаы: $W(Cl_2) = 66,9\%$

4) $Fe + 2HCl \rightarrow FeCl_2 + H_2 \uparrow$

10g	2x	x
1,000ml	1,000ml	2,2,4, / 200ml
56,2, / 200ml	22,4, / 200ml	22,4, / 200ml
56g	22,4ml	

Exp:
 $m(Fe) = 10g$
 $T(k) W(FeCl_2) = ?$
 $x = \frac{10 \cdot 22,4}{56} = 4g$
 Маябаы: $V(FeCl_2) = 4ml$

Химия

Задача №4

1) $M(C_nH_{12}) = \rho \cdot V_M = 3,75 \text{ г/л} \cdot 22,4 \text{ л/моль} = 84 \text{ г/моль}$

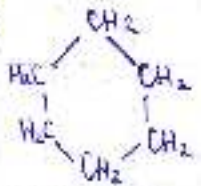
$12n + 2n = 84$

$14n = 84$

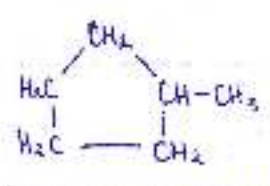
$n = 6$

Это циклоалкан, т.к. углеводород не обесцвечивает р-р $KMnO_4$, но соответствует формуле C_nH_{2n} .

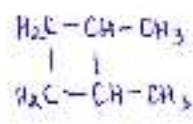
2)



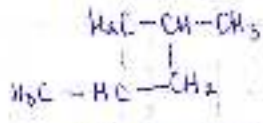
циклогексан



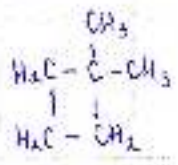
(метилциклогексан)
метилциклогексанын



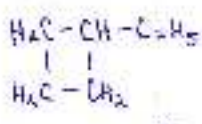
1,2-диметилциклобутан



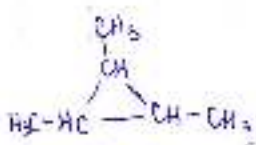
1,3-диметилциклобутан



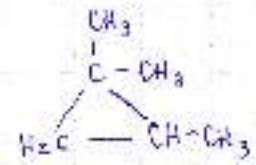
1,1-диметилциклобутан



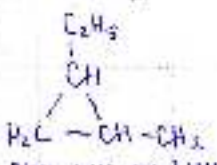
этилциклобутан



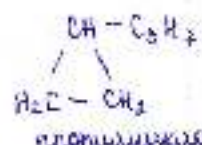
триметилциклобутан



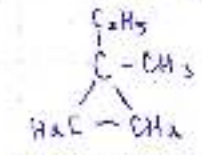
1,2-диметил-2-этилциклопропан



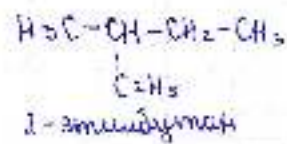
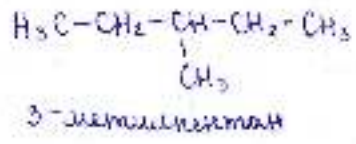
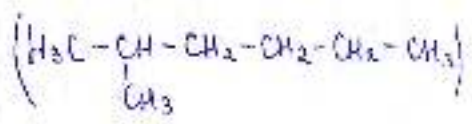
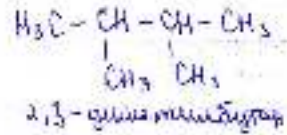
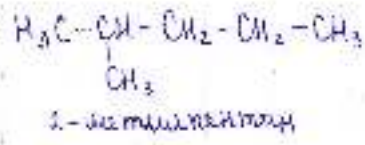
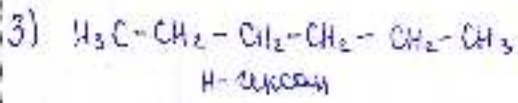
этилметилциклопропан



пропилциклопропан

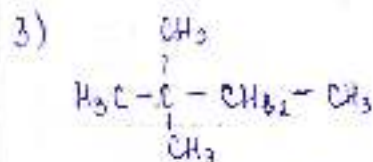


2-метил-1-этилциклопропан

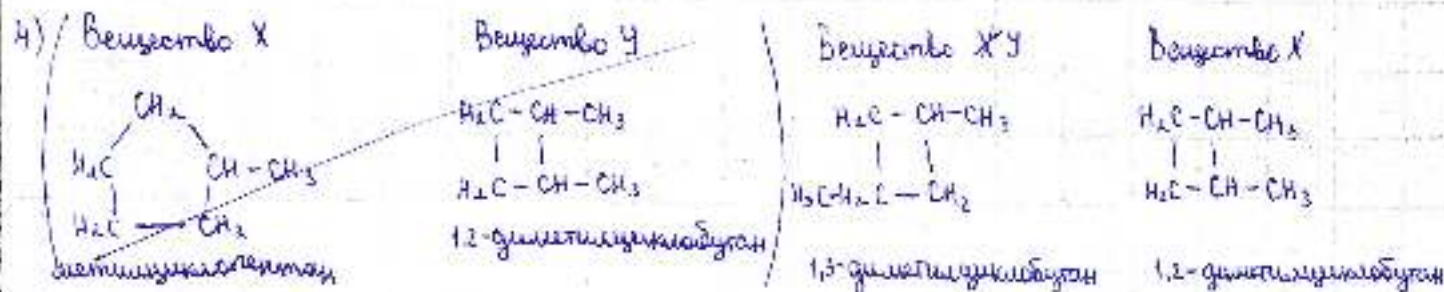


Химия

Задача №4



2,2-диметилбутан



Задача №2

Б- Cl_2 ; Г- CO ; А- CuO

Задача №3

1) MgCl_2

$$\omega(\text{Cl}) = \frac{35,5 \cdot 2}{24 + 71} \cdot 100\% \approx 37,37\%$$

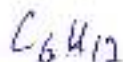
2) А- MgCl_2



4) Сп. Кетон - Алканы

$\rho(\text{кетон}) = 3,75 \text{ г/см}^3$

$V = \rho \cdot m = 3,75 \cdot 22,4 = 84 \text{ см}^3$

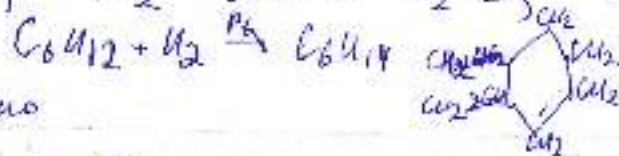
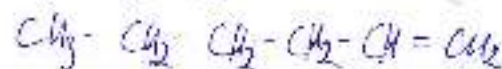
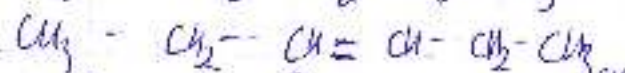
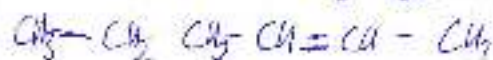
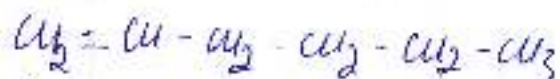
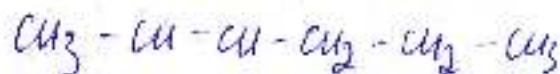


$12n + 2n = 84$

$14n = 84$

$n = 84 : 14$

$n = 6 \quad C_6H_{12}$



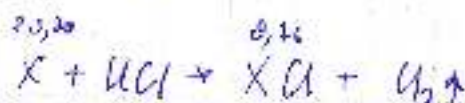
1) Дано

$m(\text{алкан}) = 29,20$

$V(H_2) \uparrow = 25,35 \text{ см}^3$

$m(\text{кетон}) = 10,44 \text{ г}$

$m_{H_2} = 28,13 \text{ г}$

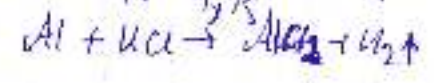


$n(H_2) = \frac{V}{V_m} = \frac{25,35 \text{ см}^3}{22,4} = 1,152$

$m_2 = m_1 - m_2 = 29,20 - 10,44 = 9,76$

$m_3 = m_2 + m_3 = 9,76 + 28,13 = 32,12$

$\Delta m = \frac{m}{n} = \frac{29,20}{1,152} = 25,32 \text{ г}$

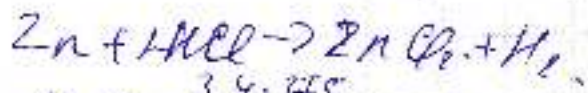
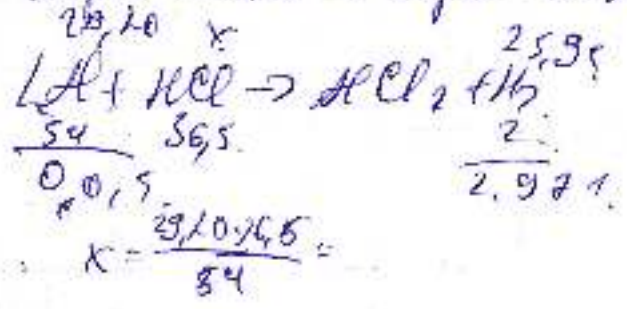


- 2)
- A - $HAlO_2$
- B - Cl_2
- B -

X - C

$$3,45 \cdot 22,4 = 84$$

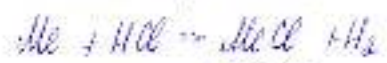
мол $46 \text{H}_2\text{O} \rightarrow$ мол $6 \text{H}_2\text{O}$.



$$\text{H}_2 \text{S} = \frac{34 \cdot 345}{22,4} = 24,5$$

C_6H_6

N1. 25% -- 1,185 (NaOH)
 29 - 20,3 = 8,22



$n(H_2) = \frac{1,25 \cdot 95}{0,022 \cdot 29,3} = \frac{25,95}{24,026} = 1,07 \text{ моль}$

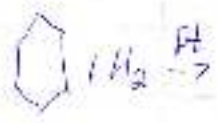
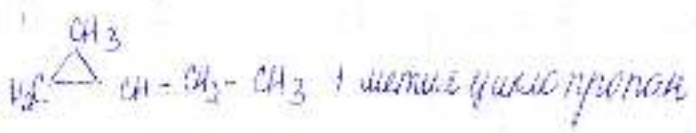
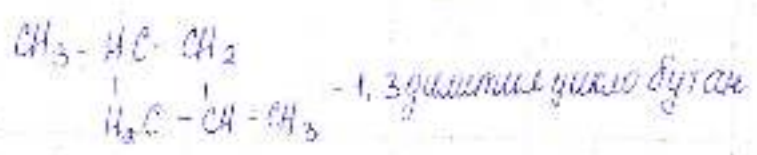
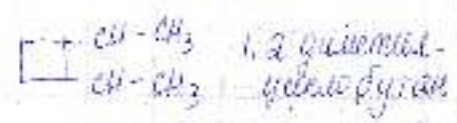
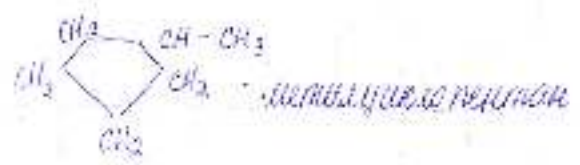
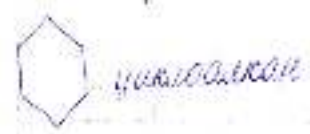
$Me = \frac{19,44}{1,08} = 18$

$m = 29 + 28,43 = 57,43$

N4. $dl = \rho \cdot Vm = 3,75 \cdot 22,4 = 84 \text{ г/моль}$

$dl(x) = 12 \text{ г/моль} \cdot 6 + 1 \text{ моль} \cdot 12 = 24 \text{ г/моль}$

Бұл қ-а C6H12 - циклогексан



N2. B - Cl2

$\Gamma - CO$

$0,404 \cdot 2 \cdot 100 = 30,3\%$

$\frac{dl}{dl + m} = 0,202$
 $35,5$

$m_1 = 1$

$M_1 = 9$

$m_2 = 2$

$M_2 = 18$

$m_3 = 3$

$M_3 = 27 \rightarrow M$

$dl = \frac{m \cdot 35,5 \cdot 0,202}{1 - 0,202} = 9m$

x dl

A - H2O3

B - HCl3

$$n(\text{AlCl}_3) = 0,037 \text{ моль}$$

$$n(\text{H}_2\text{O}) = 0,234 \text{ моль}$$

№3.



$$n(\text{Cl}) = n(\text{AgCl}) = \frac{0,832}{143,5} \cdot 10^{-3} \text{ моль}$$

$$n_0(\text{Cl}) = 8,8 \cdot 10^{-3} \text{ моль}$$

$$\mu(\text{A}) = \frac{35,5}{0,464} = 16,509$$