

1.

1.A.1. aluminijev hidrogensulfat

1.A.2. magnezijev etanoat (magnezijev acetat)

1.A.3. natrijev metoksid

1.B.4. C₆H₅OH

1.B.5. KH₂PO₄

1.B.6. Fe₂S₃

2.

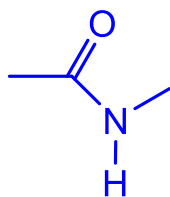
<i>smjesa</i>	<i>destilacija</i>	<i>sublimacija</i>	<i>filtracija</i>	<i>ekstrakcija</i>
kristali amonijeva klorida i natrijeva klorida		X		
vapnenac u prahu i jod		X		
klorofil iz zelenog lista				X
kalcit u prahu i voda			X	
vodena otopina kalijeve permanganata	X			
vodovodna voda	X			

3.

3.1. vodikova veza

3.2. van der Waalsove sile (interakcije)

3.3.



i svaka druga prihvatljiva formula

3.4. glikozidna veza

4.

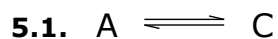
4.1. A

4.2. C

4.3. B

4.4. D

5.



5.2.

$$K_c = \frac{[C]}{[A]} = \frac{1 \text{ mmol dm}^{-3}}{2 \text{ mmol dm}^{-3}} = 0,5$$

$$K_c = \frac{[C]}{[A]} = \frac{([C] - x)}{([A] + x)} = \frac{[2 - x]}{[2 + x]} \Rightarrow x = 0,67 \text{ mmol dm}^{-3}$$

$$[A] = 2,67 \text{ mmol dm}^{-3}$$

$$[C] = 1,33 \text{ mmol dm}^{-3}$$

1 BOD za točno izračunatu K_c

1 BOD za točno izračunati x

1 BOD za točno izračunate nove ravnotežne koncentracije komponenata A i C

5.3.

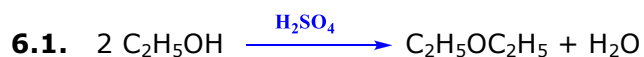
$$v = \frac{\Delta c(A)}{v(A) \cdot \Delta t} = \frac{-0,85 \text{ mmol dm}^{-3}}{(-1) \cdot 2 \text{ min}} = 0,42 \text{ mmol dm}^{-3} \text{ min}^{-1}$$

priznaje se odstupanje u očitavanje promjene koncentracije reaktanta A od $\pm 0,1 \text{ mmol dm}^{-3}$

1 BOD za ispravno isčitane podatke iz grafičkog prikaza

1 BOD za ispravno izračunatu srednju brzinu kemijske reakcije

6.



6.2. kondenzaciji



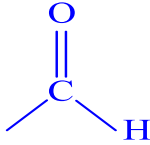
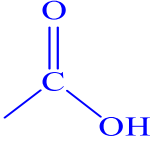
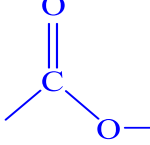
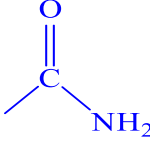
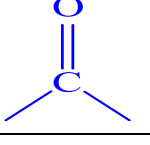
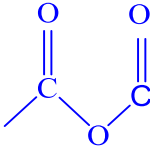
6.4. esterifikacija

6.5. hidroliza estera



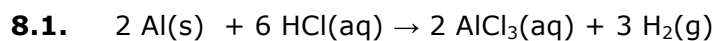
7.

	Naziv spoja	Strukturna formula
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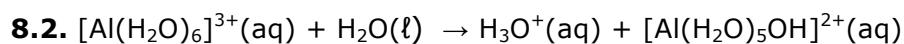
		<i>funkcijske skupine</i>
7.1.	ALDEHID	
7.2.	KARBOKSILNA KISELINA	
7.3.	ESTER	
7.4.	AMID	
7.5.	KETON	
7.6.	ANHIDRID KARBOKSILNE KISELINE	

(priznati samo strukturne formule)

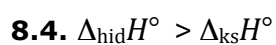
8.



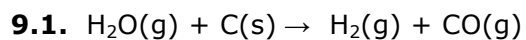
agregacijska stanja nisu nužna



8.3. Crvenu boju



9.



1 BOD za točnu jednadžbu kemijske reakcije

1 BOD za napisana agregacijska stanja

9.2. Vodeni plin

9.3. Redukcijsko sredstvo

10.

10.1.

$$n_{\text{početna}}(\text{OH}^-) = 2 \times c \times V = 2 \times 0,01 \text{ mol L}^{-1} \times 0,2 \text{ L} \\ = 0,004 \text{ mol}$$

$$n(\text{H}^+) = n_{\text{početni}}(\text{OH}^-) - n_{\text{preostali}}(\text{OH}^-) = 0,002 \text{ mol}$$

$$V(\text{HCl}) = n / c \\ = 0,002 \text{ mol} / 0,02 \text{ mol L}^{-1} \\ = 0,1 \text{ L} \\ = 100 \text{ mL}$$

1 BOD za množinu OH^- iona

1 BOD za množinu H^+ iona

1 BOD za volumen otopine

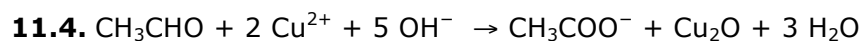
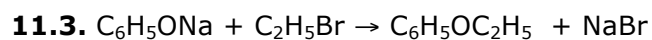
10.2.

$$\text{pH} = -\log\{[\text{H}_3\text{O}^+]/\text{mol L}^{-1}\} \\ = -\log\{1,51 \times 10^{-12}\} \\ = 11,82$$

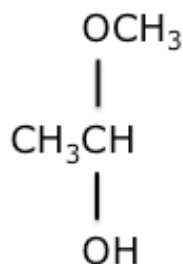
11.

11.1. $\text{C}_6\text{H}_5\text{ONa}$

11.2. brometan



11.5.



11.6. supstituciji

12.

12.1.

$$m(\text{topljiva tvar}) = b \cdot M \cdot m(\text{otapalo})$$

$$m(\text{I}_2) = 0,075 \text{ mol kg}^{-1} \cdot 0,254 \text{ kg mol}^{-1} \cdot 0,1 \text{ kg} = 0,00191 \text{ kg}$$

$$m(\text{I}_2) = 1,91 \text{ g}$$

12.2.

$$t_t(\text{otopina}) = t_t(\text{otapalo}) - \Delta t_t \quad \text{ili} \quad T_t(\text{otopina}) = T_t(\text{otapalo}) - \Delta T_t$$

$$t_t(\text{otopina}) = 0 \text{ }^\circ\text{C} - 1,86 \text{ }^\circ\text{C} = -1,86 \text{ }^\circ\text{C}$$

12.3.

$$\Delta T_t = K_{kr} \cdot m(\text{B}) / [M(\text{B}) \cdot m(\text{H}_2\text{O})]$$

$$M(\text{B}) = K_{kr}(\text{H}_2\text{O}) \cdot m(\text{B}) / [\Delta T_t \cdot m(\text{H}_2\text{O})]$$

$$= 1,86 \text{ K kg mol}^{-1} \cdot 0,0834 \text{ kg} / (5 \text{ K} \cdot 0,5 \text{ kg})$$

$$= 0,0621 \text{ kg mol}^{-1}$$

$$M(\text{B}) = 62,1 \text{ g mol}^{-1}$$

1 BOD za izraz $M(\text{B})$

1 BOD za točan rezultat