

**KEMIJA, ključ za odgovore**

<b>1. D</b>	<b>21. A</b>
<b>2. B</b>	<b>22. B</b>
<b>3. A</b>	<b>23. A</b>
<b>4. D</b>	<b>24. D</b>
<b>5. A</b>	<b>25. B</b>
<b>6. A</b>	<b>26. C</b>
<b>7. B</b>	<b>27. D</b>
<b>8. C</b>	<b>28. B</b>
<b>9. D</b>	<b>29. D</b>
<b>10. D</b>	<b>30. B</b>
<b>11. C</b>	<b>31. A !</b>
<b>12. B</b>	<b>32. C</b>
<b>13. A</b>	<b>33. A</b>
<b>14. C</b>	<b>34. C</b>
<b>15. C</b>	<b>35. D</b>
<b>16. A</b>	<b>36. B</b>
<b>17. B</b>	<b>37. C</b>
<b>18. A</b>	<b>38. A</b>
<b>19. D</b>	<b>39. C</b>
<b>20. B</b>	<b>40. B</b>

**Druga ispitna knjižica****1.****1.A.1.** natrijev hidrogensulfid**1.A.2.** barijev peroksid**1.A.3.** propanon (acetone, dimetil-ke-ton)**1.B.4.**  $\text{CuSO}_4 \cdot 5 \text{H}_2\text{O}$ **1.B.5.**  $\text{CH}_2=\text{CH}_2$ **1.B.6.**  $\text{HCOH}$ 

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**2.****2.1.1.**  $n(\text{C}) = 0,7777/12,01 = 0,064754/0,00925 = 7,000 \text{ mol}$  $n(\text{H}) = 0,0742/1,01 = 0,073465/0,00925 = 7,942 \text{ mol}$  $n(\text{O}) = 0,1481/16 = 0,00925/0,00925 = 1,000 \text{ mol}$ **1 BOD za točno određene množine ili empirijsku formulu**

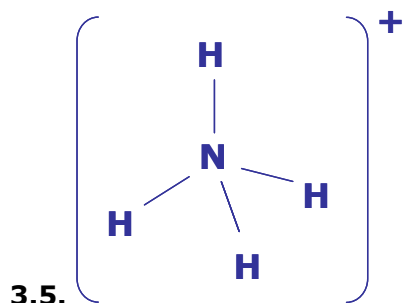
**2.1.2.** C<sub>7</sub>H<sub>8</sub>O**1 BOD za točno određenu molekulsku formulu etera****2.2.** C<sub>2</sub>H<sub>5</sub>OCH<sub>3</sub> ili CH<sub>3</sub>CH<sub>2</sub>OCH<sub>3</sub>**2.3.** C<sub>3</sub>H<sub>7</sub>OH (C<sub>3</sub>H<sub>8</sub>O)**2.4.** tercijarnim alkoholima**2.5.** 2 C<sub>2</sub>H<sub>5</sub>OCH<sub>3</sub> + 9 O<sub>2</sub> → 6 CO<sub>2</sub> + 8 H<sub>2</sub>O**3.****3.1.** N<sub>2</sub>(g) + 3H<sub>2</sub>(g) ⇌ 2NH<sub>3</sub>(g) ili N<sub>2</sub> + 3H<sub>2</sub> ⇌ 2NH<sub>3</sub>**3.2.** →, prema produktu, udesno

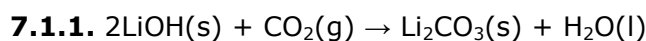
$$\mathbf{3.3.} \quad K_p = \frac{p^2(\text{NH}_3)}{p(\text{N}_2) \times p^3(\text{H}_2)}$$

$$\mathbf{3.4.} \quad K_c = \frac{c^2(\text{NH}_3)}{c(\text{N}_2) \times c^3(\text{H}_2)}$$

$$c(\text{NH}_3)^2 = K_c \cdot c(\text{N}_2) \cdot c(\text{H}_2)^3 = 0,137 \text{ mol}^2 \text{ dm}^{-6}$$

$$c(\text{NH}_3) = 0,37 \text{ mol dm}^{-3}$$

**3.6.** Tetraedarske**4.****4.1.** elektrolitski most**4.2.** Fe(s) | Fe<sup>2+</sup>(aq) || Ag<sup>+</sup>(aq) | Ag(s)**4.3.** Al(s) → Al<sup>3+</sup>(aq) + 3 e<sup>-</sup>**4.4.** 2Ag<sup>+</sup>(aq) + Zn(s) → 2Ag(s) + Zn<sup>2+</sup>(aq)**4.5.** ΔE = E<sup>o</sup><sub>katoda</sub> - E<sup>o</sup><sub>anoda</sub> = (-0,44 V) - (-1,66 V) = 1,22 V**4.6.** Elektroni putuju od anode prema katodi.

**5.****5.1.** b)**5.2.** d)**5.3.** e)**6.****6.1.** c)**6.2.** e)**6.3.** d)**7.****7.1.2.** agregacijska stanja reakcije 7.1.1.**7.2.**  $\text{pH} > 7$ , lužnata**7.3.1.**  $m(\text{CO}_2) = 2 \text{ kg (dnevno)}$   
 $m(\text{CO}_2) = 50 \text{ kg (za 25 dana)}$ 

**7.3.2.** 
$$n(\text{CO}_2) = \frac{m(\text{CO}_2)}{M(\text{CO}_2)} = \frac{50 \times 10^3 \text{ g}}{44 \text{ g mol}^{-1}} = 1136,36 \text{ mol}$$

$$n(\text{LiOH}) = 2 \cdot n(\text{CO}_2) = 2 \cdot 1136,36 \text{ mol} = 2272,72 \text{ mol}$$

**7.3.3.**  $m(\text{LiOH}) = n(\text{LiOH}) \cdot M(\text{LiOH}) = 2272,72 \text{ mol} \cdot 24 \text{ g mol}^{-1} = 54545,45 \text{ g} = 54,54 \text{ kg}$

**8.****8.2.** katalizator**8.3.** tvar B**8.4.**

$$r = \frac{Dc(\text{B})}{v(\text{B}) \cdot Dt} = \frac{4 \text{ mmol dm}^{-3}}{(-2) \cdot 30 \cdot 60 \text{ min}} = 0,00111 \text{ mmol dm}^{-3} \text{ min}^{-1}$$

Srednja brzina kemijske reakcije je 0,00111 mmol dm<sup>-3</sup> min<sup>-1</sup>.**8.4.1. 1 BOD za ispravno iščitane podatke iz grafičkog prikaza****8.4.2. 1 BOD za ispravno izračunatu brzinu kemijske reakcije****8.4.3. 1 BOD za ispravnu uporabu mjernih jedinica**

**9.**

**9.1.** jednostavna (prosta) el. ćelija (kocka)

**9.2.** 1

**9.3.** prostorno (volumno) centrirana kocka

**9.4.** 2

**9.5.** plošno (gusta) centrirana kocka

**9.6.** 4

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**10.**

**10.1.**  $\text{CH}_3\text{CH}(\text{Br})\text{CH}_3$

**10.2.** 2-brompropan

**10.3.**  $\text{CH}_3\text{CH}(\text{NH}_2)\text{CH}_3$

**10.4.** 2-aminopropan (izopropilamin)

**10.5.**  $\text{C}_6\text{H}_5\text{CH}(\text{CH}_3)_2$

**10.6.** 2-fenilpropan (izopropilbenzen)

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**11.**

**11.1.** b)

**11.2.** c)

**11.3.** d)

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**12.**

**12.1.** e)

**12.2.** c)

**12.3.** a)