

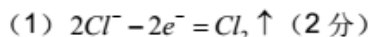
北京博飞教育中心独家奉献

一、(每题 3 分, 共 54 分)

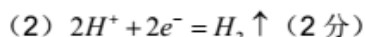
1. A 2. B 3. B 4. B 5. A 6. D
7. C 8. C 9. D 10. B 11. C 12. D
13. C 14. D 15. A 16. B 17. D 18. A

二、(本题含 2 小题, 共 24 分)

19. (12 分)



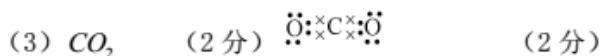
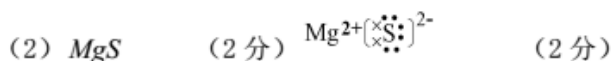
将润湿的 KI 淀粉试纸放在右管口, 观察其是否变成蓝色 (3 分)



有气体产生, 电极附近的溶液变蓝色 (2 分)

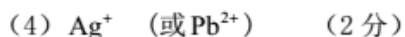
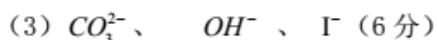
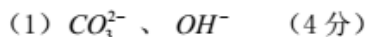
氢离子还原成氢气后, 溶液中的 OH^- 浓度相对较大, 溶液呈碱性 (3 分)

20. (12 分)

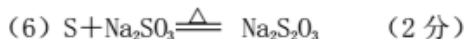
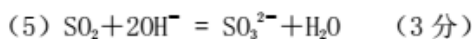
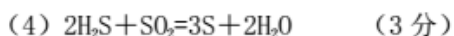
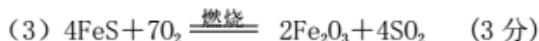
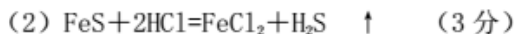
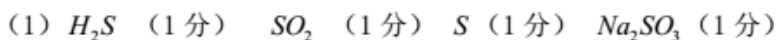


三、(本题含 2 小题, 共 34 分)

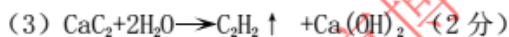
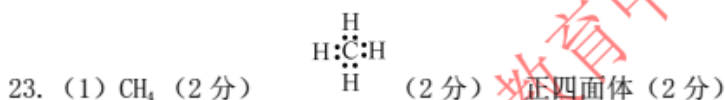
(21) (16 分)



22. (18 分)



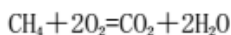
四、(本题 18 分)



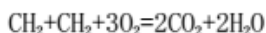
(4) $m(A) = 7.0g \times 22.9\% \div 16g/mol = 0.10 mol$

$n(B) = 7.0g \times 40\% \div 28g/mol = 0.10mol$

$n(C) = 7.0g \times 37.1\% \div 26g/mol = 0.10mol$



0.10 0.10 0.20



0.10 0.20 0.20



0.10 0.20 0.10

$m(CO_2) = 44g/mol \times (0.10 + 0.20 + 0.20)mol = 22g$

$n(H_2O) = 0.02mol + 0.20mol + 0.10mol = 0.50mol$

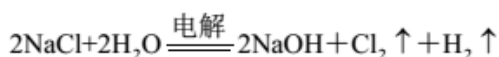
$n(H_2O) = 0.20mol + 0.20mol + 0.10mol = 0.50mol$

(8 分)

五(本题 10 分, 任选一题)

24. 硝酸铵的分子式为 NH_4NO_3 , 摩尔质量为 80g/mol , 氮的摩尔质量为 14g/mol ; 硝酸铵中含 2 个 N 原子, 纯净硝酸铵的含氮百分率为 $\frac{2 \times 14\text{g/mol}}{80\text{g/mol}} \times 100\% = 35\%$ 含杂质为 8% 的硝酸铵的含氮百分率为 $35\% \times (1 - 8\%) = 32.2\%$

25. 设生产 500kg 烧碱需要纯氯化钠的质量 x



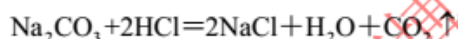
$$\begin{array}{cc} 2 \times 58.5 & 2 \times 40 \\ x & 500\text{kg} \end{array}$$

$$x = \frac{2 \times 58.5 \times 500\text{kg}}{2 \times 40} = 731\text{kg}$$

需要含 85% 氯化钠的食盐为 $731\text{kg} \div 85\% = 860\text{kg}$

六. (本题 10 分, 任选一题)

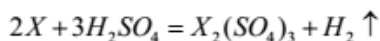
26.



$$\begin{array}{cc} 1 & 2 \\ \frac{0.1500\text{kg}}{106.0\text{g/mol}} & c\text{mol/L} \times 0.03000\text{L} \end{array}$$

$$c(\text{HCl}) = \frac{0.1500\text{g} \times 2}{0.03000\text{L} \times 106.0\text{g/mol}} = 0.0943\text{mol/L}$$

27



$$\begin{array}{cc} 2M & 3 \times 22.4\text{L} \end{array}$$

$$\begin{array}{cc} 3.47\text{g} & 2.24\text{L} \end{array}$$

$$M(X) = \frac{3.47\text{g} \times 3 \times 22.4\text{L/mol}}{2 \times 2.24\text{L}} = 52.0\text{g/mol}$$

所有 $A(X) = 52.0$