

②6 参考答案

1. C 2. C 3. B 4. D 5. B 6. C 7. B 8. D

9. B 10. A 11. C 12. C

13. 热值;内

14. 支点;远;靠近

15. 90;400

16. BADC;3600;900;25%

17. 左;减小;铁;电磁感应;大;滑片向左移动增大电流.

18. 20;0.4;合格

19. S₁、S₃;2:3;2:3

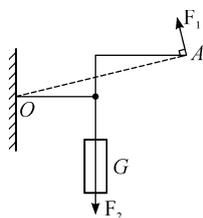
20. 裂变;不可再生

21. 闭合;保持不变

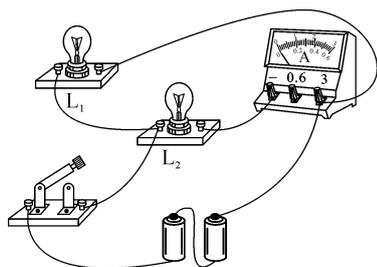
22. 化学;负;0.6

23. 变小;定值电阻R;1.2;1.4

24.



25.



26. (1) 被推动距离;

(2) 速度;速度相同,质量越大,动能越大;

(3) 甲、乙;质量相同,速度越大,动能越大.

27. (1) 断开;

(2) A;

(3) 小灯泡短路;

(4) 1.52;

(5) 灯丝电阻随温度的升高而增大.

28. (1) 由杠杆的平衡条件 $F_1L_1=F_2L_2$ 可知当阻力臂和动力不变时,阻力与动力臂成正比;即动力臂越大,阻力越大;动力臂越小,阻力越小.故为保持平衡,起重臂的

长度越长的塔式起重机,配备的平衡重的质量应越大;

(2) 图示中滑轮a为定滑轮,其作用是改变施力方向;

由题意可知该滑轮组承担总重的绳子有2股,故 $G=2F=$

$$2 \times 2 \times 10^4 \text{N} = 4 \times 10^4 \text{N}, \text{ 由 } G = mg \text{ 可得: } M = \frac{G}{g} = \frac{4 \times 10^4}{10} =$$

4000kg;

(3) 由于水平移动时,重力方向上没移动距离,故水平移动过程中重力没做功,

故此过程中克服货物重力做功: $W = Gh = 1.5 \times 10^4 \text{N} \times 10 \text{m} = 1.5 \times 10^5 \text{J};$

(4) 有用功: $W_{\text{有用}} = G'h' = 1.2 \times 10^4 \text{N} \times 30 \text{m} = 3.6 \times 10^5 \text{J},$

$$\text{总功: } W_{\text{总}} = \frac{W_{\text{有用}}}{\eta} = \frac{3.6 \times 10^5}{90\%} = 4 \times 10^5 \text{J},$$

$$\text{该起升电动机的实际总功率: } P = \frac{W}{t} = \frac{4 \times 10^5}{50} = 8000 \text{W}.$$

故答案为:(1)大;(2)改变施力方向;4000;(3)此过程中克服货物重力做功 $1.5 \times 10^5 \text{J};$ (4)该起升电动机的实际总功率是8000W.

$$29. (1) I_2 = \frac{U}{R} = \frac{220}{220} = 1 \text{A}$$

(2) S₁断开,S接a时,该空气炸锅处于低温挡工作 $I_{\text{低}} =$

$$\frac{U}{R_1 + R_2} = \frac{220}{55 + 220} = 0.8 \text{A}$$

$$U_1 = I_{\text{低}} R_1 = 0.8 \times 55 = 44 \text{V}$$

$$(3) P_{\text{高}} = \frac{U^2}{R_1} + \frac{U^2}{R_2} = \frac{220^2}{55} + \frac{220^2}{220} = 1100 \text{W}; P_{\text{低}} = \frac{U^2}{R_2} = \frac{220^2}{220} =$$

$$220 \text{W}; \frac{P_{\text{高}}}{P_{\text{低}}} = \frac{1100}{220} = \frac{5}{1}$$

30. (1) 人受到的重力: $G_{\text{人}} = m_{\text{人}} g = 60 \text{kg} \times 10 \text{N/kg} = 600 \text{N};$

人克服重力所做的功: $W = Fs = G_{\text{人}} h = 600 \text{N} \times 30 \text{m} = 1.8 \times 10^4 \text{J};$

(2) 汽油放出的热量: $Q_{\text{放}} = W = 1.8 \times 10^4 \text{J},$ 由 $m = \frac{Q_{\text{放}}}{q} =$

$$\frac{1.8 \times 10^4}{4.6 \times 10^7} \approx 3.9 \times 10^{-4} \text{kg};$$

(3) $W_{\text{有}} = \eta Q_{\text{放}} = 30\% \times 1.8 \times 10^4 \text{J} = 5400 \text{J};$

由于汽车匀速行驶,则汽车的牵引力: $F_{\text{牵}} = F = 2000 \text{N};$

$$\text{汽车运动的路程: } s = \frac{W}{F} = \frac{5400}{2000} = 2.7 \text{m}.$$