

(۴۱) (۴)

$$p = \frac{mgh}{t} \rightarrow 300 = \frac{4 \times 10 \times 25 \times 21}{4}$$

(۴۲) تیرہ (۳)

(۴۳) تیرہ (۱)

دور ۱	زاویه ۲π
۲۵	n → n = 9π

$$\omega = \frac{\Delta \theta}{\Delta t} = \frac{9 \cdot \pi}{4}$$

(۴۴) تیرہ (۲۰)

$$\frac{k_2}{k_1} = \frac{m_2}{m_1} \times \left(\frac{v_2}{v_1} \right)^2 \rightarrow$$

(۴۵) تیرہ (۳)

$$\frac{125}{100} = \frac{m_2}{m_1} \times \left(\frac{\Delta}{2} \right)^2 \rightarrow \frac{\Delta}{2} = \frac{m_2}{m_1} \times \frac{25}{14} \rightarrow \frac{m_2}{m_1} = \frac{2}{5}$$

$$m_2 = 1 \text{ kg}$$

$$m_2 - m_1 = 1 \text{ kg}$$

(۴۶) تیرہ (۱)

$$x = \frac{3}{2} t^2 - 15t + 30$$

$$t_1 = 0 \rightarrow x_1 = +30$$

$$t_1 = 5 \rightarrow x_2 = -24.5$$

$$\Delta x = -2.5$$

$$v_{av} = \frac{-2.5}{5} = -0.5$$

$$t_2 = 10 \rightarrow x_1 = -40$$

$$t_2 = 15 \rightarrow x_2 = -24.5$$

$$\Delta x = 15.5$$

$$v_{av} = \frac{15.5}{5} = 3.1$$

(۱)

میرا جواب
۰۹۱۴۱۰۷۰۲۳

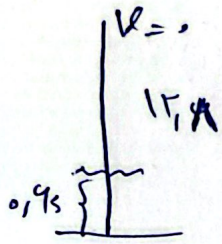
(47) نرسنه (4)

$$x = \frac{1}{2} a t^2 + v_0 t + x_0$$

$$\begin{cases} 0 = \frac{1}{2} a \times 2 + 2 v_0 + 2 \\ 0 = \frac{1}{2} a \times 10 + 8 v_0 + 2 \end{cases} \quad \begin{cases} a = 4 \\ v_0 = -14 \end{cases}$$

$$v = a t + v_0 = 4$$

(48) نرسنه (1)



$$y = 8 t^2$$

$$12.8 = 8 t^2$$

$$t = 1.4 s$$

$$t' = 1 s$$

$$y = 8(1) = 8 m$$

$$12.8 - 8 = 4.8$$

(49) نرسنه (2)

$$x_A - x_B = 18$$

$$\frac{1}{2} (-2) t^2 + 2 t - \frac{1}{2} \times 1 t^2 + 1 t = 18 \quad t = 5 s$$

$$x_B - x_A = 18$$

(50) نرسنه (4)

$$S = 1. + 14 + 4 = 19$$

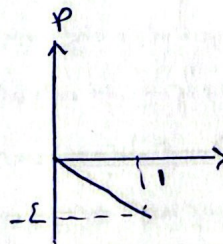
$$v_r = 1$$

$$a = \frac{1-0}{8} = 1/8$$

(51) نرسنه (4)

$$v = \sqrt{2gh} = 1.4 m/s$$

$$mv = 0.2 \times 1.4 = 0.28$$



(52) نرسنه (2)

(53) نرسنه (3)

$$x = 0.10 \cos(2\pi \times \frac{1}{\lambda}) = 0.10 \cos(\frac{2\pi}{\lambda}) = 0 \rightarrow k_{max}$$

$$k_{max} = \frac{1}{\lambda} m A^2 \omega^2 = \frac{1}{\lambda} \times 0.12 \times (\frac{2\pi}{1})^2 \times (2\pi)^2 = 7.0 \pi^2$$

(54)

(۵۴) ترتیب (۱)

(۵۵) ترتیب (۲)

$$\frac{v}{\lambda} = \nu \quad \lambda = 2.0 = 2 \text{ m}$$

$$v = \lambda f \rightarrow f = \frac{3 \times 10^8}{2 \times 2} = 1.5 \times 10^8$$

(۵۶) ترتیب (۲)

(۵۷) ترتیب (۳)

(۵۸) ترتیب (۱)

$$\frac{n_1}{\lambda} = R \rightarrow \frac{1}{\lambda} = R \left(\frac{1}{14} - \frac{1}{28} \right) \rightarrow \lambda_1 = \frac{28 \times 14}{9} R$$

$$\frac{n_2}{\lambda'} = R \rightarrow \frac{1}{\lambda'} = R \left(\frac{1}{14} - 0 \right) \rightarrow \lambda' = 14 R$$

(۵۹) ترتیب (۲)

(۶۰) ترتیب (۴)

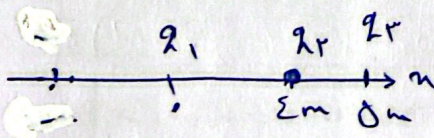
$$\rho = \frac{m}{V} = \frac{\lambda_1 \times 10^{-14}}{\frac{4}{3} \times \pi \times (1.1 \times 10^{-14})^3} = 1.1 \times 10^{12}$$

(۶۱) ترتیب (۳)

(۶۲) ترتیب (۲)

(۶۳) ترتیب (۳)

$$\frac{C_2}{C_1} = \frac{1.0}{4.0} = \frac{1}{4}$$



$$F_{12} = F_{21}$$

$$\frac{\Delta x_1}{r_1^2} = \frac{|\Delta x_2|}{r_2^2} \rightarrow |\Delta x_2| = 2$$

(۶۴)

$$V = \mathcal{E} - rI$$

$$4 = 9 - 1.5r \rightarrow r = 2 \Omega$$

$$P = \mathcal{E}I - rI^2 = 9 \times 1.5 - 2 \times 2.25 = 9$$

(۴۴) ترتیب (۲)

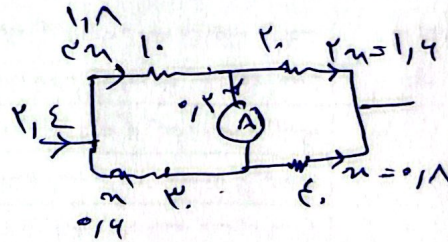
$$\frac{P_2}{P_1} = \frac{R_1}{R_2} = \left(\frac{r_2}{r_1}\right)^2 = \left(\frac{99}{100}\right)^2 = \frac{9801}{10000} = 0.9801$$

(۴۵) ترتیب (۱)

$$\frac{r_1 \times 1.5}{R_1} = \frac{r_2}{R_2} = 1.5 = \frac{r_1}{2}$$

$$\frac{r_1 \times 2}{4} = \frac{R_1}{R_2} \quad R_T = \frac{120}{4} = 30$$

$$I = \frac{8 \times 4}{120} = 2.67$$



(۴۶) ترتیب (۳)

(۴۷) ترتیب (۴)

$$F = BIL \sin \theta$$

$$= 0.8 \times 10^{-2} \times 8000 \times 1.0 \times \frac{\sqrt{2}}{2} = 10\sqrt{2}$$

(۴۸) ترتیب (۱)

(۴۹) ترتیب (۴)

(۵۰) ترتیب (۴)

(۵۱) ترتیب (۱)

$$A_1 V_1 = A_2 V_2$$

$$\pi (1.0)^2 V_1 = \pi (0.5)^2 V_2$$

$$\frac{V_2}{V_1} = \frac{1.0}{0.25}$$

(۵۲) ترتیب (۴)

$$P = 70.8 - 10.8 = 60.0 \text{ cmHg} \rightarrow 1.8 \text{ cmHg}$$

$$218 \times 81 = 174 \times 91 \rightarrow 91 = 10.18$$

(۷۳) ترتیب (۳)

(۷۴) ترتیب (۲)

(۷۵) ترتیب (۲)

$$\frac{P_1}{T_1} = \frac{P_2}{T_2} \rightarrow \frac{178}{273} = \frac{18}{T_2} \rightarrow T_2 = 241.4$$

نوعی
۰۹۱۲۱۷۰۲۳