

نوین کنکور

کنکور

امتحان نهایی

**نوین کنکور
شرط لازم و کافی
برای موفقیت**

novinkonkor.com

تحریر ذیل - ۰۹۱۴۸۴۳۹۸۷۷

قدیم قدیم - میں نے یہ درجہ کیا ہے

چونکہ $V_v + V_o$ برابر ۳۶ (میں نے یہ فرض کیا ہے) (۳)

(۴۶) تفصیل - (۲)

$$E \propto \frac{1}{\lambda} \Rightarrow \frac{E_{\infty}}{E_{\lambda_0}} = \frac{\lambda_0}{\lambda} = \frac{2}{1} \quad (۴۷)$$

$$V_{av} = \frac{X_{if} - X_o}{14} = \frac{0 - 28}{14} = -2 \text{ m/s} \quad (۴۸)$$

(۴۸) برابر میں کتاب f اور λ ثابت ہے (۱)

$$|V_{av}| = +2 \text{ m/s} \quad (۲)$$

$$a_A = 1.2 \text{ m/s}^2 \quad (۴۹)$$

(۴۹) میں کتاب میں (میں نے یہ فرض کیا ہے) (۲)

$$x_A = \frac{1}{2} a t^2 + v_o t + x_o \Rightarrow x_A = \frac{1}{2} t^2 - 1.0 t - 1.0$$

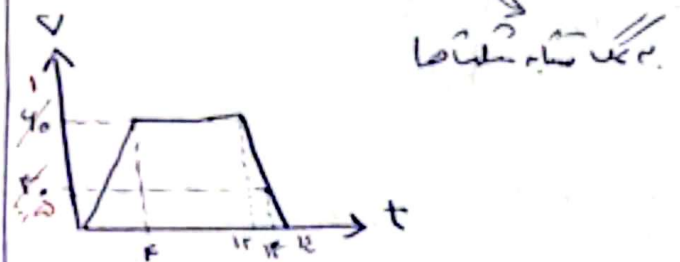
$$-17.0 = \frac{1}{2} t^2 - 1.0 t - 1.0 \Rightarrow t = 1.5 \quad t_r = 2.5$$

$$V_{11} = 30 \frac{\text{km}}{\text{h}} = 8 \frac{\text{km}}{\text{min}} \quad (۵۰)$$

$$a_B = -1.2 \text{ m/s}^2$$

$$x_B = \frac{1}{2} t^2 + 1.2 t + 1.0 \xrightarrow{t=2.5} x_B = 2.8 \text{ m}$$

$$|x_A - x_B| = 2.0 \text{ m}$$



$$F_N = 40 \text{ N} \quad (۵۱)$$

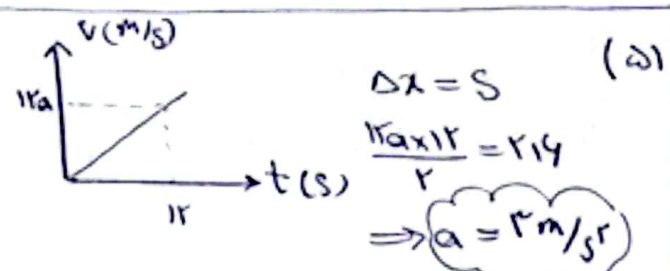
$$\Delta x = S_{0-12} = \frac{f \times 1}{2} + (1 \times 1) + \frac{(1/2) \times 1}{2}$$

$$\Delta x = 10.75 \text{ km} \quad (۲)$$

$$R_1 = \sqrt{(F_N)^2 + (40)^2} = 40 \text{ N}$$

$$F_N = F_{AN}$$

$$F_k = \mu \cdot F_N = \frac{7}{8} \times 40 = 35 \text{ N}$$



$$R_r = \sqrt{(35)^2 + (40)^2} = 50 \text{ N}$$

$$\tan \alpha_1 = \frac{40}{F_N} = \frac{4}{5} \quad \tan \alpha_r = \frac{F_N}{35} = \frac{4}{5} \quad \alpha = 36.87^\circ$$

$$\Delta x = S \quad \frac{12 \times 12}{2} = 72 \quad \Rightarrow a = 2 \text{ m/s}^2$$

$$v_{max} = A\omega, \quad \omega = \frac{2\pi}{T} \quad (41)$$

$$\Rightarrow T = \frac{2\pi A}{v_{max}} = \frac{2\pi \times 1 \times 10^{-2}}{1 \times 10^{-1}} = 7.1 \text{ s}$$

(2) صحیح

$$v = \sqrt{\frac{F}{\mu}} \quad F \uparrow \Rightarrow v \uparrow \quad (4)$$

$$\lambda = Tv \uparrow \Rightarrow \lambda \uparrow$$

(2) صحیح

$$P = \frac{E}{t} = \frac{nhc}{\lambda t} \quad (41)$$

$$\Rightarrow n = \frac{P\lambda t}{hc} = 1.2 \times 10^{10} \quad (2) \text{ صحیح}$$

$$\frac{1}{\lambda_{max}} = R \left(\frac{1}{r_0} - \frac{1}{r_y} \right) \rightarrow \lambda_{max} = \frac{r_0 \times r_y}{11R} \quad (4r)$$

$$\frac{1}{\lambda_{min}} = R \left(\frac{1}{r_0} - \frac{1}{\infty} \right) \rightarrow \lambda_{min} = \frac{r_0}{R}$$

$$\frac{\lambda_{max}}{\lambda_{min}} = \frac{r_0 \times r_y}{11R} \times \frac{R}{r_0} = \frac{r_y}{11} = \frac{14}{11} \quad (1) \text{ صحیح}$$

(4r) صحیح و یان بعد اول کتاب درست

$$F_e = mg \Rightarrow \frac{q \times 10^{-9} \times q}{4\pi \times 10^{-6}} = 1 \times 10^{-1}$$

$$\Rightarrow q = 10^{-11}$$

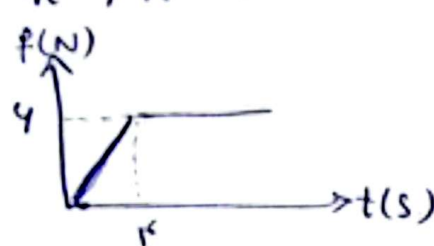
$$3q = ne \Rightarrow n = \frac{3 \times 10^{-11}}{1.6 \times 10^{-19}} = 1.875 \times 10^8$$

$$x^2 = 9.15 \times 10^8 \quad (2) \text{ صحیح}$$

$$P_{smax} = \mu_s \cdot F_N = 0.2 \times 20 = 4 \text{ N} \quad (42)$$

$$P_k = \mu_k \cdot F_N = 0.1 \times 20 = 2 \text{ N}$$

$$P_k = \mu_k \cdot F_N = 0.2 \times 20 = 4 \text{ N}$$



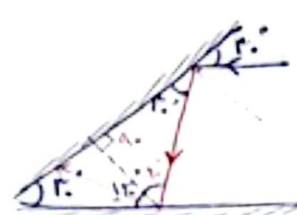
$$F = 1/2 at \rightarrow 0 \leq t \leq 2 \quad F < P_{smax}$$

در ۲ ثانیه (۲) صحیح و بعد از ۲ ثانیه (۲) صحیح است

نیز (۱) صحیح است

$$W = \frac{GM}{R^2} \quad (42) \text{ صحیح}$$

$$\frac{W_{شماره}}{W_{زمین}} = \frac{M_{شماره}}{M_{زمین}} \times \left(\frac{R_{شماره}}{R_{زمین}} \right)^2 = 2 \times \left(\frac{1}{2} \right)^2 = \frac{1}{2}$$



$$45^\circ - 30^\circ \rightarrow 15^\circ - 30^\circ \rightarrow 0 \quad \checkmark$$

$$E = K + U \quad (43) \text{ صحیح}$$

$$\Rightarrow U = E - K = 0.44 - 0.114 = 0.326$$

$$E = \frac{1}{2} k A^2 = \frac{1}{2} \times 200 \times 0.04^2 = 0.16 \text{ J}$$

$$K = \frac{1}{2} m v^2 = \frac{1}{2} \times 2 \times 0.14^2 = 0.14 \text{ J}$$

سؤال (الف) $\frac{Vr}{r} = (R_1 + R_2) \times I$

$\Rightarrow R_1 = R_2 \cdot R$

مطابق $I = \frac{Vr \cdot R}{1R_2}$

$\Rightarrow R_2 = 1R_2 \cdot R$

(4n) قانون رست و قانون سری با هم

① صحیح

→ (4q) ② صحیح

$\mathcal{E} = -N \frac{d\Phi}{dt}$

(v) ③ صحیح

$I = \frac{-N \Delta B \cos \theta}{\Delta t} = 1.72 A$

$V = \frac{K}{r} n ((r\omega)^2 - (\omega)^2) = \frac{K}{r} n \frac{r^2}{r} \omega^2$

$V = \frac{m}{\rho} = \frac{K \times 1.0 \times 10^9}{\frac{r_0}{vn}} = \frac{K \Delta n}{r}$

$\Rightarrow V = 1 \text{ cm}$

③ صحیح

① صحیح (vr)

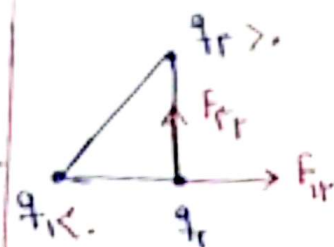
$P_A = P_B \Rightarrow P_1 + P_2 = P_r + P_s$

$\Rightarrow \frac{12 \times 1.0 \times 10^9}{1R_2 \cdot R} + P_2 = \frac{12 \times 1.0 \times 10^9}{1R_2 \cdot R} + P_s$

$\Rightarrow P_2 - P_s = 9.7R - 1R_2 \cdot R = -K_{max} \cdot R$

$\frac{F_{rr}}{F_{lr}} = \frac{K \cdot R_1 \cdot R_2}{K \cdot R_1 \cdot R_2} \times \frac{(r_{rr})^2}{(r_{lr})^2}$

$\frac{4 \times 1.0 \times 10^9}{12 \times 1.0 \times 10^9} = \frac{1R_2}{1R_2} \Rightarrow \frac{1R_2}{1R_2} = \frac{r}{r}$



$\frac{q_{rr}}{q_{lr}} = -\frac{r}{r}$

② صحیح

$m = \rho V \xrightarrow{V=AL} m = \rho A L$

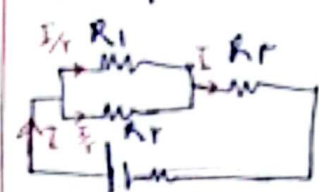
$\frac{m_A}{m_B} = \frac{\rho_A}{\rho_B} \times \frac{A_A}{A_B} \times \frac{L_A}{L_B} = 4$

$R = \rho \frac{L}{A} \Rightarrow R \propto A \Rightarrow \frac{A_A}{A_B} = \frac{P_A}{P_B} = 4$

③ صحیح

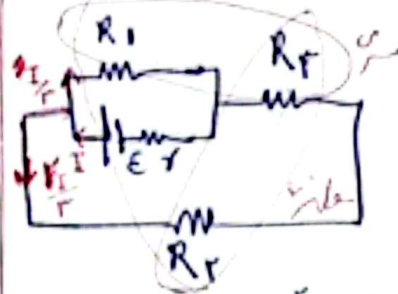
با $R_{eq} = 4 \Omega$! $R_r = 4 \Omega$ (4q)

$P_r = R_r I^2 = 4(1)^2 = 4 \text{ W}$



$I = \frac{\mathcal{E}}{R_{eq} + r} = 2 \text{ A}$

$I_1 = I_r = 1 \text{ A}, I_r = 1 \text{ A}$



$I = \frac{\mathcal{E}}{R_{eq} + r}$

$I = \frac{r}{r+1} = K \text{ A}$

$P_r = R_r I_r^2 = 4 \times \frac{1}{4} = \frac{r}{r}$

$\Delta P = \frac{r}{r} - 4 = \frac{15}{16} \text{ W}$

③ صحیح

$$W_t = \Delta K$$

$$\textcircled{r} v_{cr}^2 (vr)$$

$$W_t = \frac{1}{2} m (v_r^i - v_r^f)$$

$$W_t = \frac{1}{2} (r_i) (v_r^i - v_r^f) = 400 \text{ J}$$

$$= 400 \text{ J}$$

$$\Delta K + \Delta U = 0$$

$$\textcircled{r} v_{cr}^2 (vr)$$

$$\frac{1}{2} m (v_r^i - v_r^f) + m g (h_r - \dots) = 0$$

$$12 \text{ m} = 1.0 \text{ g} \Rightarrow \boxed{h = 12 \text{ m}}$$

$$P = \frac{Q}{t} = \frac{m L_v}{t}$$

$$\textcircled{1} v_{cr}^2 (va)$$

$$\Rightarrow t = \frac{m L_v}{P} = \frac{r \times r \times r \times \dots}{r \dots}$$

$$\Rightarrow t = r \times r \times r \times \dots \div 40 \quad \boxed{va, r \text{ min}}$$

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