Solution Quiz # 5

Phys. 410 (221)

AV(x) = K/xl

Tue using points are at , E>0

$$E = V(0) = K |x|$$

$$E = V(x_1) = K|x_1|$$

$$\Rightarrow |x_1| = \frac{E}{K} \Rightarrow x_1 = \frac{E}{K} \Rightarrow x_2 = \frac{E}{K} \Rightarrow x_3 = \frac{E}{K} \Rightarrow x_4 = \frac{E}{K} \Rightarrow x_5 = \frac{E}{K} \Rightarrow x_$$

$$\int_{-\infty}^{+\infty} dx \sqrt{2ME(1-\left|\frac{x}{x}\right|)} dx \qquad U = \frac{x}{x}$$

$$= 2 \int dx \sqrt{zmE} \sqrt{1-u'} x_0 du , &f V=1-u'-x_1 of$$

$$= 2 \int dx \sqrt{zmE} \sqrt{1-u'} x_0 du = 2 \sqrt{zmE'} x_0 \sqrt{v'} dv = 2 \sqrt{zmE'}$$

$$= 2 \int dx \sqrt{zmE} \sqrt{1-u} \propto_0 du \int_0^1 dx \sqrt{2u} = 2 \sqrt{2mE} \propto_0 \int_0^1 \sqrt{1-u} du = 2 \sqrt{2mE} \sim_0 \int_0^1 \sqrt{1-u} du = 2 \sqrt{2mE} \sim_0 \int_0^1 \sqrt{1-u} du = 2 \sqrt{2mE} \sim_0 \int_0^1 \sqrt{1-u} du = 2 \sqrt{2mE} \sim_0$$

$$\frac{1}{4} \frac{4}{3} x_0 \sqrt{2ME} = (N + \frac{1}{2}) \pi$$

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$$\frac{1}{4} \frac{4}{3} x_0 \sqrt{2ME} = \frac{1}{4} \frac{2}{3} \pi$$

$$\frac{4}{3} \times_{0} \sqrt{2mE} = (n+\frac{1}{2})^{n} = \frac{1}{4} \times_{0} \sqrt{2m} = \frac$$

Q2.) E < Vo Tung points at

$$\Rightarrow |x| = \frac{\sqrt{0-E}}{K} \Rightarrow x = \pm x_0$$

$$x_0 = \frac{V_0 - E}{K}$$

Thus is a famin => Tunning, characterized

by transmission coefficient

Fransmission Coffee Lieut
$$T = |C| = e^{-2x} = e^{-2x} = e^{-2x} \left(\sqrt{-8} \frac{\sqrt{2m}}{\pi K} (v_0 - E)^{3/2} \right)_{x/2}$$

$$Y = \frac{1}{4} \int \sqrt{2m} E v_0 - K(x_1 - E)^2 dx = \frac{1}{4} \sqrt{2m} (v_0 - E)^2 \left(\sqrt{1 - \frac{1}{2}} \frac{x_1}{x_2} \right)$$

$$V = \frac{1}{4} \int \sqrt{2m} E v_0 - K(x_1 - E)^2 dx = \frac{1}{4} \sqrt{2m} (v_0 - E)^2 \left(\frac{2}{3} \right)$$

$$\mathcal{Y} = \frac{1}{4\pi} \int \sqrt{2m} \, \mathbf{E} \, \mathbf{V}_0 - \mathbf{K}(\mathbf{X}| - \mathbf{E}) \, d\mathbf{V} = \frac{2}{4\pi} \int \sqrt{2m} \, (\mathbf{V}_0 - \mathbf{E}) \, \left(\frac{2}{3} \right) \\
\mathcal{Y} = \frac{2}{4\pi} \int \sqrt{2m} \, (\mathbf{V}_0 - \mathbf{E}) \, \int \sqrt{1 - u} \, \mathbf{x}_0 \, d\mathbf{V} = \frac{2}{4\pi} \int \sqrt{2m} \, (\mathbf{V}_0 - \mathbf{E}) \, \left(\frac{2}{3} \right) \\
\mathcal{Y} = \frac{2}{4\pi} \int \sqrt{2m} \, \mathbf{E} \, \mathbf{V}_0 - \mathbf{K}(\mathbf{X}| - \mathbf{E}) \, d\mathbf{V} = \frac{2}{4\pi} \int \sqrt{2m} \, (\mathbf{V}_0 - \mathbf{E}) \, d\mathbf{V}_0 = \frac{2}{4\pi} \int \sqrt{2m} \, (\mathbf{V}_0 - \mathbf{E}) \, d\mathbf{V}_0 = \frac{2}{4\pi} \int \sqrt{2m} \, (\mathbf{V}_0 - \mathbf{E}) \, d\mathbf{V}_0 = \frac{2}{4\pi} \int \sqrt{2m} \, (\mathbf{V}_0 - \mathbf{E}) \, d\mathbf{V}_0 = \frac{2}{4\pi} \int \sqrt{2m} \, (\mathbf{V}_0 - \mathbf{E}) \, d\mathbf{V}_0 = \frac{2}{4\pi} \int \sqrt{2m} \, (\mathbf{V}_0 - \mathbf{E}) \, d\mathbf{V}_0 = \frac{2}{4\pi} \int \sqrt{2m} \, (\mathbf{V}_0 - \mathbf{E}) \, d\mathbf{V}_0 = \frac{2}{4\pi} \int \sqrt{2m} \, (\mathbf{V}_0 - \mathbf{E}) \, d\mathbf{V}_0 = \frac{2}{4\pi} \int \sqrt{2m} \, (\mathbf{V}_0 - \mathbf{E}) \, d\mathbf{V}_0 = \frac{2}{4\pi} \int \sqrt{2m} \, (\mathbf{V}_0 - \mathbf{E}) \, d\mathbf{V}_0 = \frac{2}{4\pi} \int \sqrt{2m} \, (\mathbf{V}_0 - \mathbf{E}) \, d\mathbf{V}_0 = \frac{2}{4\pi} \int \sqrt{2m} \, (\mathbf{V}_0 - \mathbf{E}) \, d\mathbf{V}_0 = \frac{2}{4\pi} \int \sqrt{2m} \, (\mathbf{V}_0 - \mathbf{E}) \, d\mathbf{V}_0 = \frac{2}{4\pi} \int \sqrt{2m} \, (\mathbf{V}_0 - \mathbf{E}) \, d\mathbf{V}_0 = \frac{2}{4\pi} \int \sqrt{2m} \,$$