In-Class Assignment

PHY 2105 (A)

Assignment II

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1. Justify that the motion of the LRC circuit can be converted to that of a simple harmonic oscillator with certain changes in its components.
2. Sketch the Lissajous' figure for the inputs of $v = Ccos(\omega t + \pi/4)$ and $v' = Dcos(\omega t + \pi/2)$, which are perpendicular to each other.
3. In oscillatory circuit L= 0.4H, C = 0.0020μF. What is maximum value of resistance(R) for the circuit to be oscillatory?