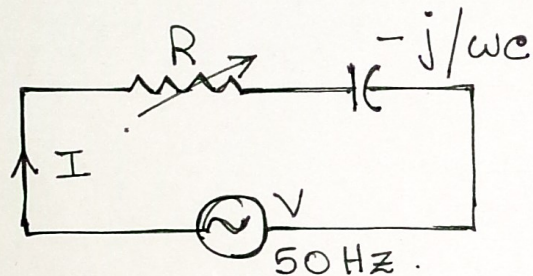


Assignment-4.

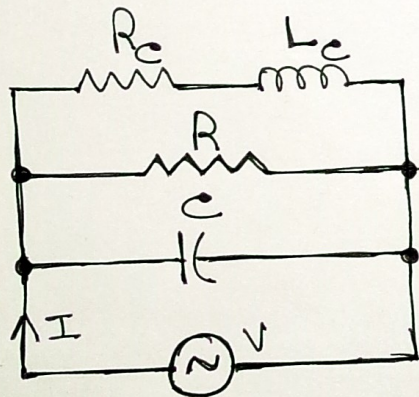
1. In an R-L series circuit, the inductance is variable. If an AC voltage of V volts is applied at 50 Hz, find the maximum power transfer from source to load. (5)
2. In the above problem, if instead of varying the inductance, from 0 to ∞ , if resistance is varied, keeping other factors constant, what would be the maximum power (5)

3.



Find the current locus of series RC circuit and find maximum power (5)

4.



Obtain the resonant frequency of the given circuit in terms of circuit parameters. (5)

⊕ N.B.:- All questions to be done manually [NO SPICE] with appropriate phasor diagram where necessary. No data insufficiency so, don't ask for component values in mail !!