Concept Question 8-13: Assuming the values of  $V_s$ ,  $R_s$ ,  $R_L$ , and  $L_L$  are fixed, what values of  $R_M$  and  $C_M$  lead to maximum transfer of power from the source to  $R_L$ ?

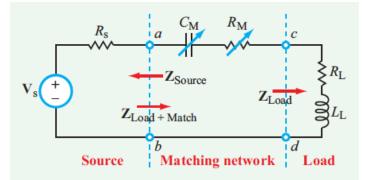


Figure 8-14: Matching network in between the source and the load.

To match the load to the source in the circuit, we should select

$$R_{\rm M} = R_{\rm s} - R_{\rm L}$$
$$C_{\rm M} = \frac{1}{\omega^2 L_{\rm L}}$$