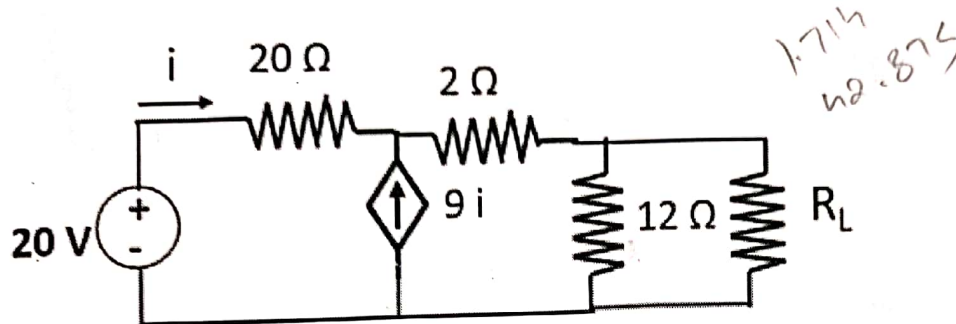


# EE 101: Introduction to Electrical and Electronic Circuits, 2019

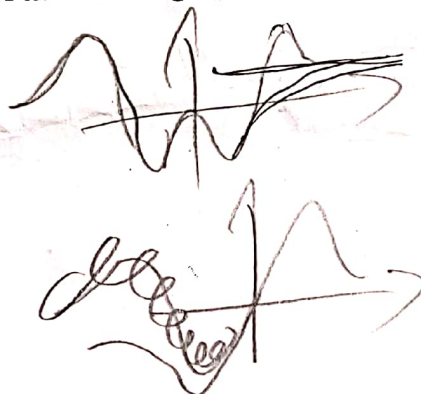
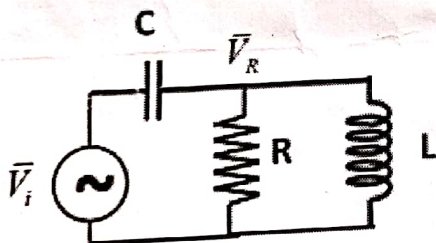
## Quiz 2

(Show all the steps in the solution properly. Weightage=6.5%)

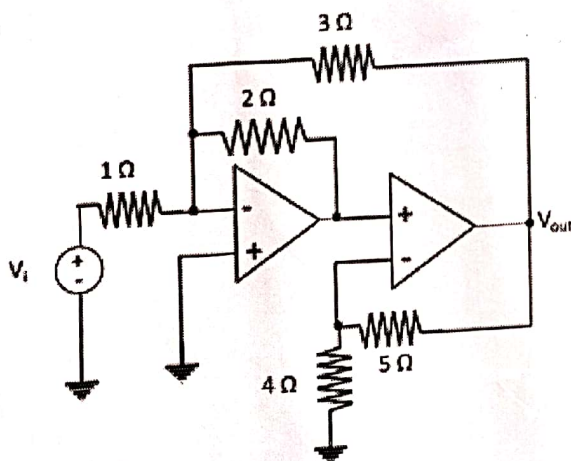
- 1) Find the value of  $R_L$  for which power absorbed is maximum. Find out this power. [3 marks]



- 2) Consider the circuit shown below. Find out the transfer function  $H(\omega)$ . ( $H=V_R/V_i$ ). Find out the values of  $\omega$  at which the real part of transfer function is 0. Find out the values of  $\omega$  at which the imaginary part of transfer function is 0. Assuming,  $Q=R*\sqrt{C/L}>>1$ , sketch the real and imaginary parts of  $H$  as a function of  $\omega$ . Assuming  $Q>>1$ , find out approximately, the maximum value of  $\text{abs}(H)$ ? [6 marks]



- 3) For the circuit shown below, find out the output voltage  $V_{out}$ . [4 marks]



$$-\frac{9}{5} V_i$$