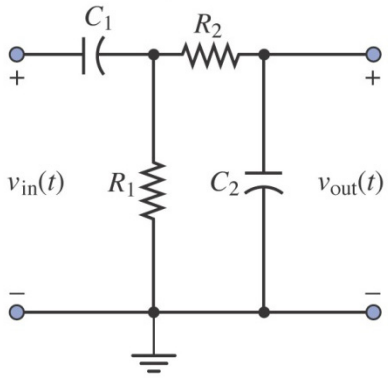
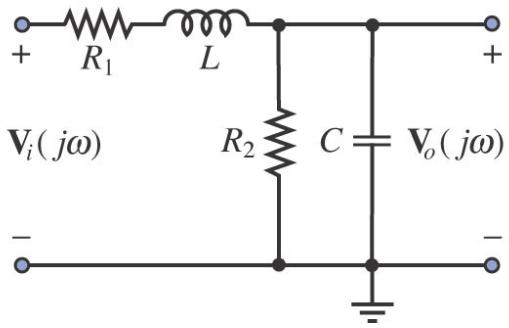
Problem 1

Determine the transfer function of the filter circuit below. Plot the magnitude and the phase of the transfer function versus frequency. $R_1 = 20\ k\Omega$; $R_2 = 100\ k\Omega$; $C_1 = 100\ \mu F$; $C_2 = 5\ \mu F$.



Problem 2

Determine the filter type and calculate and plot the transfer function. L = 11 mH; C = 0.47 nF; $R_1 = 2.2\ k\Omega$; $R_2 = 3.8\ k\Omega$.



Problem 3

In the filter circuit below, $R_s = 500\ \Omega$; $R_L = 5\ k\Omega$; $R_c = 4\ k\Omega$; L = 1 mH; C = 5 pF. Computer and plot the transfer function. What type of filer is this?