

CMPE 226 Electronics Lab Report

Experiment # 4

Capacitive & Inductive circuit at AC

	Std. No	Name	Group	Date
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____

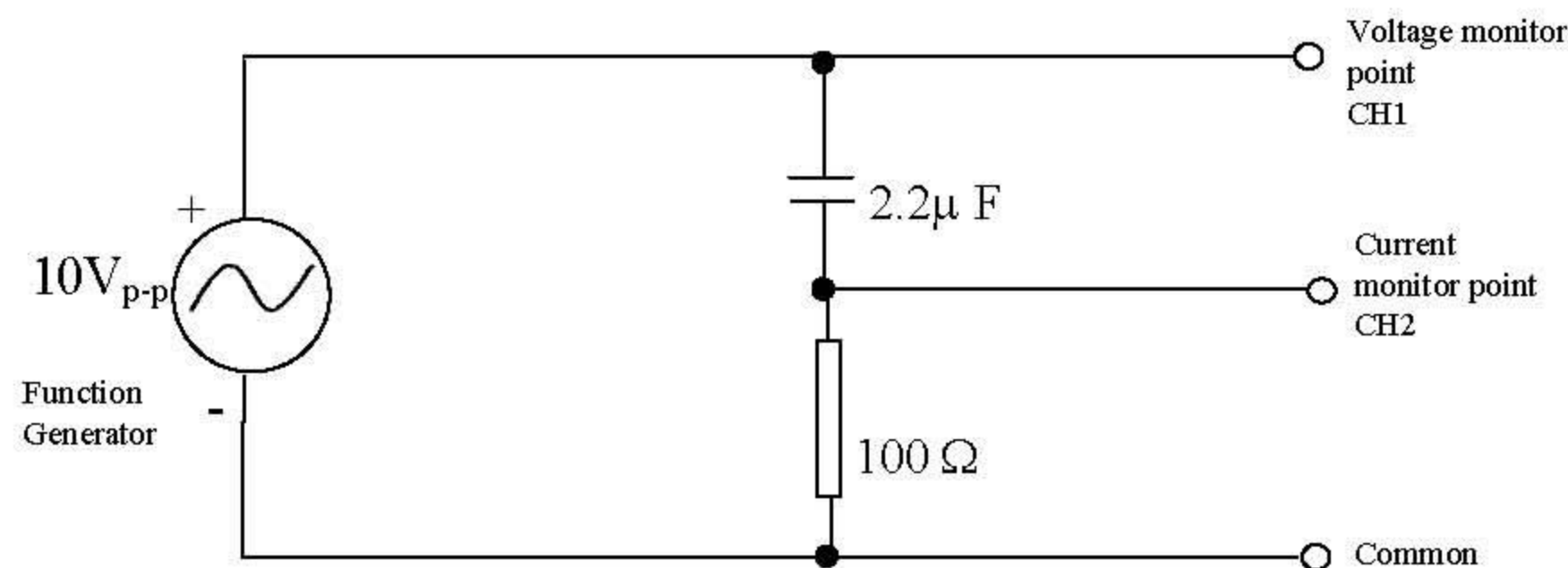
Aim of the Experiment: To explore the idea of the Capacitance and Inductance of a component

Let us see what happens when a sinusoidal alternating voltage is applied to a capacitor.

Step1: Connect the power supply unit to the mains supply line. DO NOT switch on yet.

Step2: Connect up the following capacitive circuit as below and perform following settings

Figure 1



Step3: Set the function generator to give a 10V peak-to-peak sine waveform at 250 Hz.

Set the oscilloscope as follows

CH1 channel 1V/cm

CH2 channel 500mV/cm

Timebase to 1ms/cm

Zero both the traces and then observe the two waveforms on the oscilloscope.

Step4: Carefully draw the two waveforms into figure 3, showing their relative positions with respect to each other.

Step5: Connect up the following inductive circuit as below, Figure 2 (only replace inductor with capacitor and perform previous oscilloscope settings).

Step6: Carefully draw the two waveforms into figure 4, showing their relative positions with respect to each other.

Figure 2

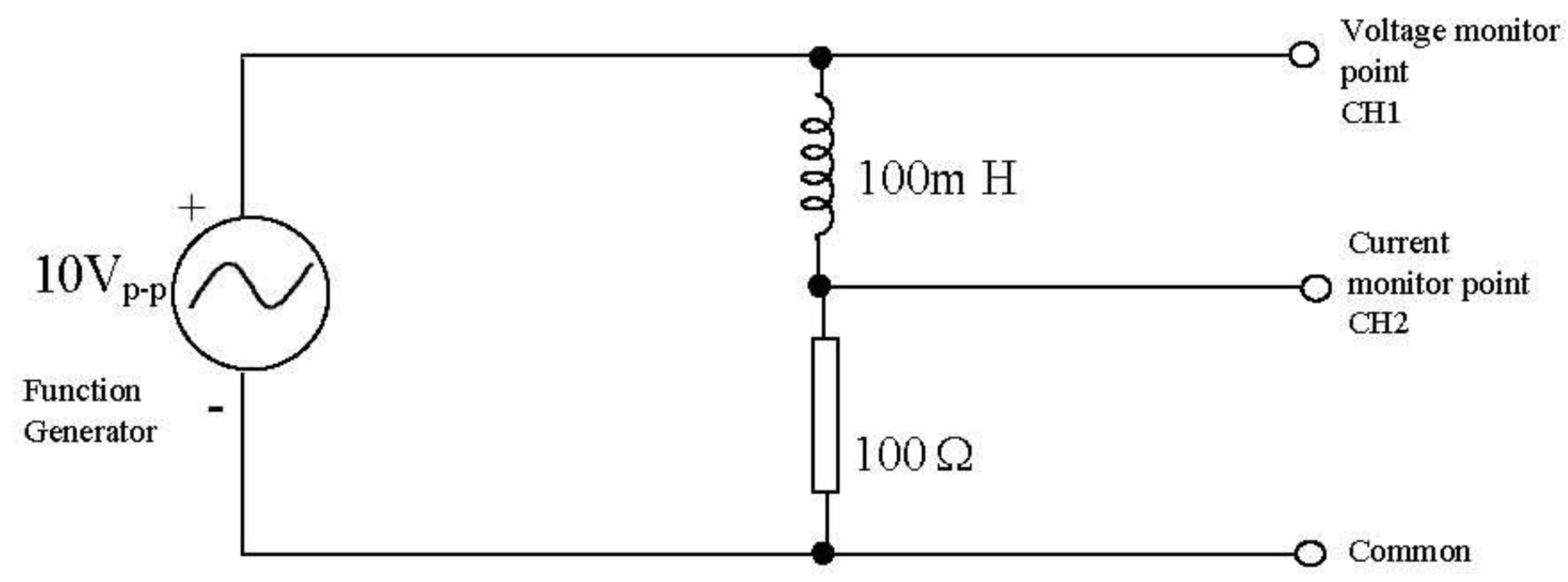


Figure 3

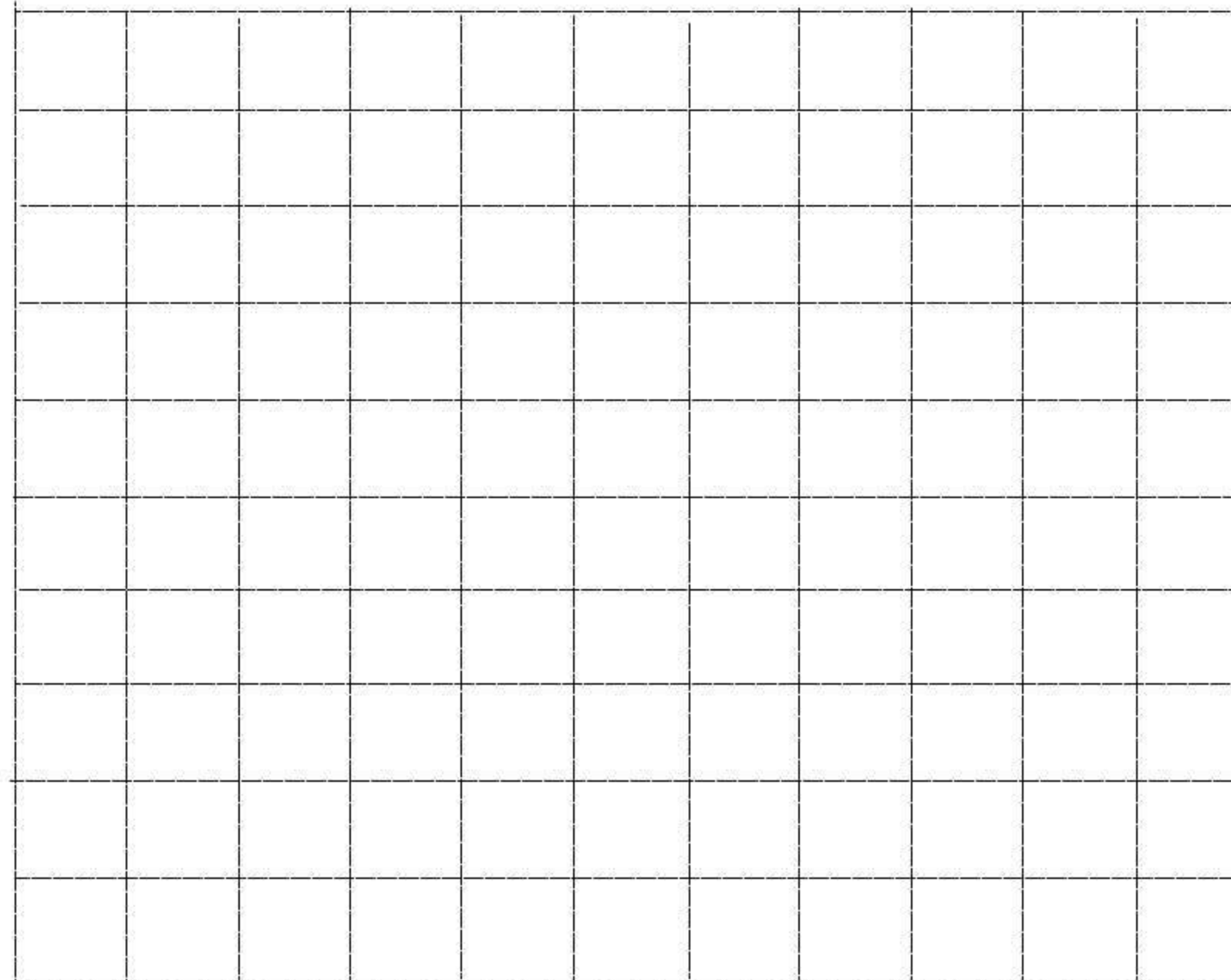
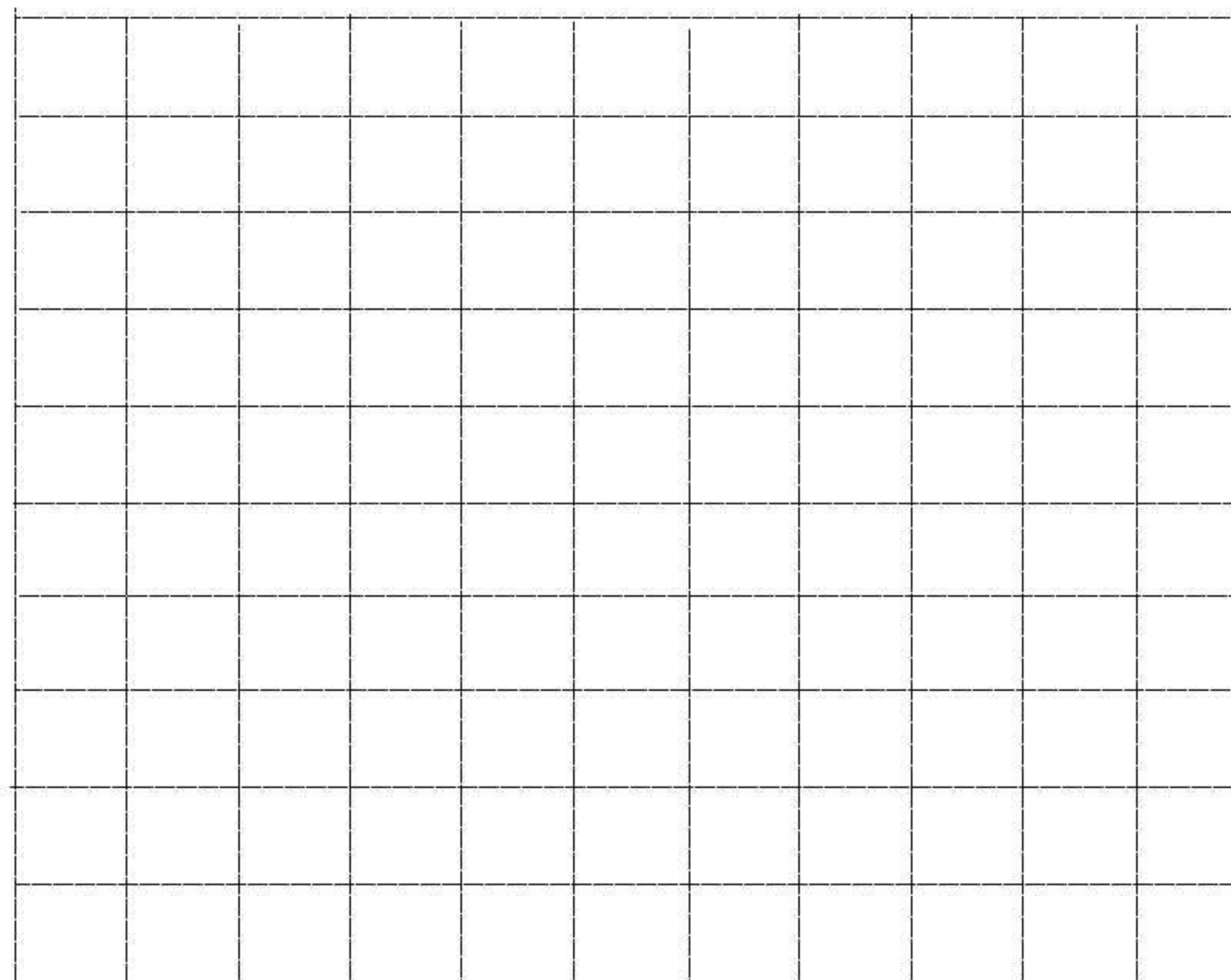


Figure 4



(With the difference of both graph in Figure 3 and Figure 4 can you come to any conclusions between capacitive and inductive circuit)

Conclusions