

EXPERIMENT 4

SINUSOIDAL STEADY STATE RESPONSE (PSPICE)

PRELIMINARY WORK

P1 Calculate all node voltages of the circuit given in figure 1 by hand (Both amplitude and phase)

$$V1=10\sin(5000*2*\pi*t)$$

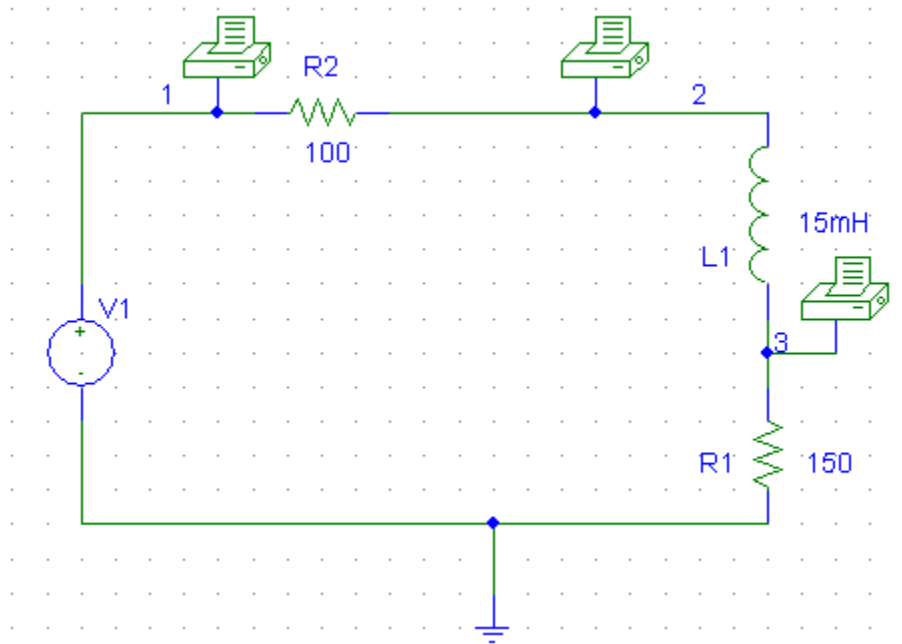


Figure 1

P2 Calculate all node voltages of the circuit given in figure 2 by hand (Both amplitude and phase)

$$V2=10\sin(5000*2*\pi*t)$$

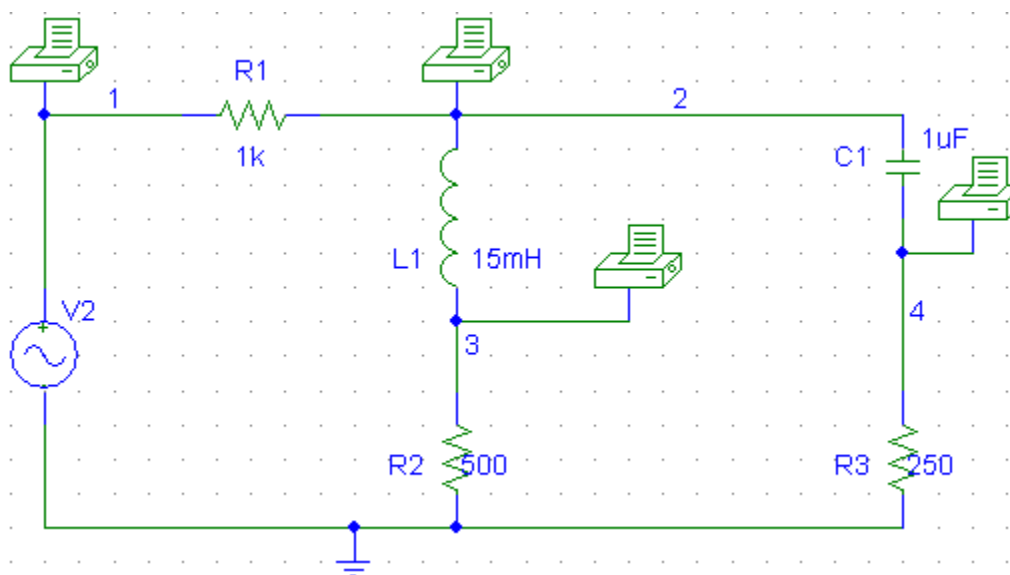


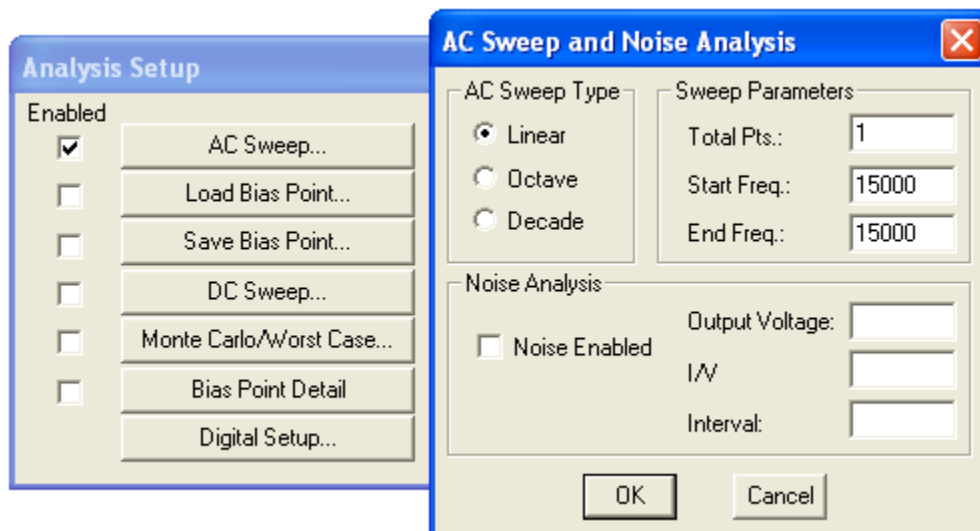
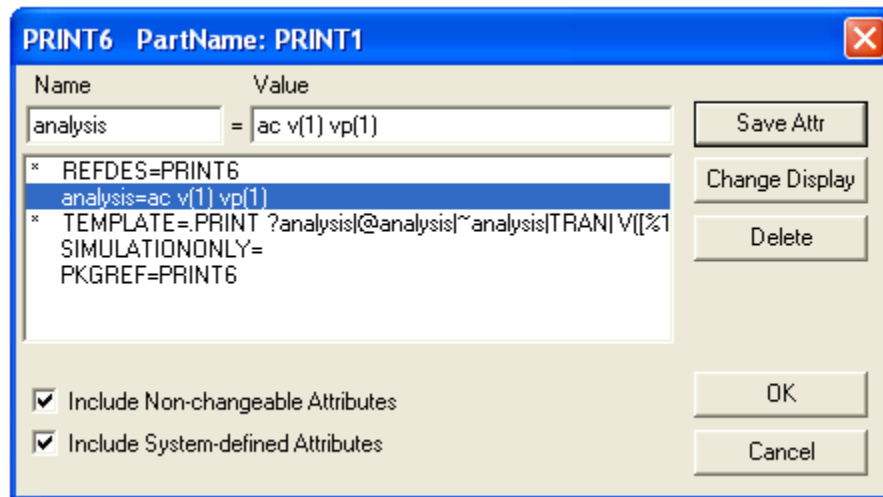
Figure 2

EXPERIMENTAL WORK

E1 Setup the circuit given in Figure 1. Choose **VSRC** as voltage source and set its amplitude as 10V. Choose **GND_EARTH** as ground. Simulate the circuit. Record the voltage and phase values of the circuit by viewing the output file **View>Output File**.

Do not forget the label the nodes as in Figure 1

Analysis tab in PRINT1 box should be set like below “ac v(1) vp(1)”



Simulation parameters for circuit given in Figure1

E2 Repeat the same procedure for Figure 2

CONCLUSION

C1 Compare the theoretical values you found in Preliminary with your simulation results