## **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=10sin(5000\*2\*pi\*t)





**P2** Calculate all node voltages of the circuit given in figure 2 by hand (Both amplitude and phase) V2=10sin(5000\*2\*pi\*t)



#### **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)"

PRINT6 PartName: PRINT1	
Name     Value       analysis     =     ac v(1) vp(1)       *     REFDES=PRINT6       analysis=ac v(1) vp(1)       *     TEMPLATE=.PRINT ?analysis[@analysis]~analysis[TRAN] V[[%1] SIMULATIONONLY=       PKGREF=PRINT6	Save Attr Change Display Delete
<ul> <li>Include Non-changeable Attributes</li> <li>Include System-defined Attributes</li> </ul>	OK Cancel

Applusis Sotup		AC Sweep and Noise Analysis	
	AC Sweep	AC Sweep Type Sweep Parameters C Linear Total Pts.: 1 C Octave Start Freq.: 15000	1
	Save Bias Point	Decade     End Freq.: 15000	
· 🗖	DC Sweep Monte Carlo/Worst Case	Output Voltage:	
	Bias Point Detail Digital Setup	I/V Interval:	
		OK Cancel	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