

## Homework 9

Due: Tuesday, 11/21/00

The following questions deal with the material covered in Chapter 4 of your textbook. Try to keep your answers brief, but be sure you learn the definitions and can answer similar questions on the Final Exam.

**Problem 1:**

- a) Define Inherent Noise
- b) Define Interference Noise
- c) Briefly explain the differences between Inherent Noise and Interference Noise

**Problem 2:**

- a) What is the mean (average) value of Inherent Noise
- b) Define RMS Value and explain what it indicates in reference to noise analysis
- c) Define SNR and write the equation for the SNR of a signal  $V_x(t)$  with noise  $V_n(t)$ .
- d) Briefly define the unit dBm.

**Problem 3:**

Define the following terms and site an example of where this noise source might be found in integrated circuits.

- a) Thermal Noise
- b) Shot Noise
- c) Flicker Noise