

# MEEN 2210 Electromechanical Engineering Systems Spring 2011

## Studio Quiz #1 Studio Period # 3 January 25, 2011

Name: \_\_\_\_\_ Session: \_\_\_\_\_

Questions 1, 2, 3: 10 pts. each; Question 4: 20 pts.; Questions 5, 6: 25 pts. each

1. T/F An oscilloscope generates the voltage waveforms to stimulate the system.
2. T/F A function generator measures both sine wave and square wave voltages.
3. T/F The following statements all describe the same sine wave:  
 $V_p = 10 \text{ volts}$      $V_{\text{rms}} = 7.1 \text{ volts}$      $V_{\text{pp}} = 20 \text{ volts}$
4. A 5 kHz periodic pulse wave has a pulse width of 50  $\mu\text{s}$ . What is its duty cycle?
5. Sketch a 10 Hz square wave with  $V_{\text{pp}} = 10 \text{ volts}$  and a +2 volt DC offset.

6. Write the equation for the sine wave shown in the plot below.

