Work Sheet

Team members: _____

1.- _____ 2.- _____

3.- _____ 4.- _____

5.- _____ _____

Instructor: _____

Analysis

Note: Show all of your work and make sure to label the scale of all of your graphs!

Signal Generator:

1. In the first bullet of number 2, you are asked to measure the period of a signal using the oscilloscope; do this and include the associated uncertainty.

2. Sketch the graph of the 2 volt p-p signal of the second bullet in question 2, including grid lines. What Volts/Div setting gives the most accuracy in doing this?

[1]This is an adaptation from Jed Rembold original version

3. Draw the sketches indicated under number 3 of your lab book.

4. Do the bullet under Frequency of a Tuning fork. What orientation gives the largest feedback? Calculate percent error between measured frequency and the frequency listed on the tuning fork.

5. Sketch and label the setup in figure 1, labeling each component.

6. Sketch the waveform described in the first bullet of the diode rectifier circuit and measure it's peak to peak voltage. Explain why this different from a standard sine wave.

7. Draw the circuit diagram and sketch the waveform described in the second bullet of the diode rectifier circuit. What is the peak to peak voltage ripple on the capacitor voltage, and how does it compare to the peak to peak voltage of the last question?

Questions:

1. Estimate the highest frequency you can measure using this oscilloscope. *Hint: Assume you can get no more than 1 period/division.*

2. Estimate the lowest frequency you can measure using this oscilloscope. *Hint: Allow the width of the screen to equal one period.*

Parameters for Hands-On quiz

Amplitude in Volts: _____ Frequency in Hertz: _____ Waveform: _____ Channel _____