**SYSC 3203: Fall 2019**

**Lab 5 Report**

Submit this page to the lab instructor.

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Student ID:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Student ID:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**1: Drawing a Complete Circuit Schematic**

1.1: Draw a complete circuit schematic showing how each of the sub-circuits that you designed and implemented in Milestones 1 through 4 are combined in your final design. (Use separate paper for this).

**2: Assembly and Testing of the EMG-controlled Mouse**

2.1: Complete the last column of Table 1.

*Table 1: EMG Controlled Mouse test points*

|  |  |  |
| --- | --- | --- |
| Test point | Location | Sketch/Description of Output |
| TP1 | Output of the instrumentation amplifier. |  |
| TP 2 | Output of the high-pass filter and gain stage. |  |
| TP 3 | Output of the rectifier. |  |
| TP 4 | Output of the integrator. |  |
| TP 5 | Output of the comparator with threshold. |  |
| TP 6 | Output of the monostable circuit. |  |
| TP 7 | Output of the optoisolator. |  |

Verified: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date/Time:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**3. Optimization of the EMG-Controlled Mouse**

3.1: Explain any improvements that you made to your circuit.

 **4. Friendly Competition**

 4.1: Record your Flappy Bird high-score!