**Passive Membranes Lab Notebook**

**Reading:** [Passive Membranes](https://canvas.case.edu/courses/13687/pages/passive-membrane-properties-the-resting-potential-and-electrical-models-of-passive-properties)

**Name:**

**Date:**

**Purpose of Lab:**



















|  |  |
| --- | --- |
| Capacitance |  |
| Conductance |  |
| Resting Potential |  |



|  |  |
| --- | --- |
| Stimulus Delay |  |
| Stimulus Current |  |
| Pulse Duration |  |
| Inter-Stimulus Interval |  |
| Number of Pulses |  |
| Total Duration  |  |



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|  |
| --- |
| $$g=2μS$$ |
| $$I\_{STIM}$$ | $$V\_{MAX}$$ |
| $$10nA$$ |  |
| $$20nA$$ |  |
| $$30nA$$ |  |





|  |
| --- |
| $$g=1μS$$ |
| $$I\_{STIM}$$ | $$V\_{MAX}$$ |
| $$10nA$$ |  |
| $$20nA$$ |  |
| $$30nA$$ |  |









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|  |
| --- |
| Length of Time to Reach… |
| $$\frac{1}{2 } original height:$$ |  |
| $$\frac{3}{4} original height:$$ |  |
| $$\frac{7}{8} original height:$$ |  |





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|  |  |
| --- | --- |
| Membrane Capacitance | Maximum Height |
| $$4 nF$$ |  |
| $$6 nF$$ |  |
| $$8 nF$$ |  |



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Paste screenshot here. Make sure to label the figure, you can do this by right clicking the image and clicking “Insert Caption”





|  |  |  |
| --- | --- | --- |
| Membrane Conductance | Max Pulse Height | Time to Reach Half Max Height |
| 1 µS |  |  |
| 2 µS |  |  |
| 4 µS |  |  |



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Paste screenshot here. Make sure to label the figure, you can do this by right clicking the image and clicking “Insert Caption”

|  |
| --- |
| Length of Time to Reach… |
| $$\frac{1}{2 } original height:$$ |  |
| $$\frac{3}{4} original height:$$ |  |
| $$\frac{7}{8} original height:$$ |  |



|  |  |
| --- | --- |
| Membrane Capacitance | Time |
| 4 nF |  |
| 8 nF |  |

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|  |  |
| --- | --- |
| Membrane Resting Potential: |  |



|  |  |
| --- | --- |
| Membrane Resting Potential:  |  |





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|  |  |
| --- | --- |
| Membrane Resting Potential: |  |



|  |  |
| --- | --- |
| Membrane Resting Potential: |  |





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