**COMPUTATIONAL NEUROSCIENCE COURSEWORK**

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**QUESTION 1**

A screenshot of a cell phone

Description automatically generated

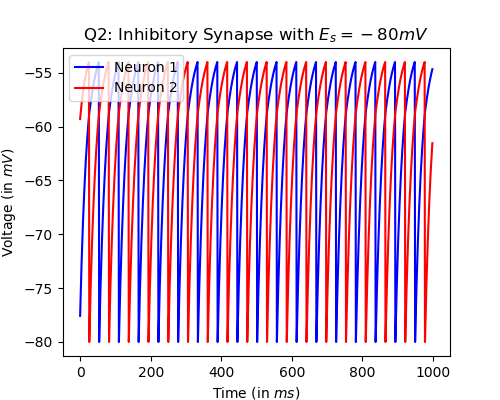
**QUESTION 2**

Voltage rate for two neurons connected with excitatory synaptic connection:

**A screenshot of a cell phone

Description automatically generated**

Voltage rate for two neurons connected with inhibitory synaptic connection:

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**QUESTION 3**

PART A:  
Given the parameters from Q1, any value above 3nA will produce an action potential.

PART B:

Integrate and Fire model with 2.9nA electrode current. Electrode current is smaller than the minimum current needed to produce an action potential.

A screenshot of a cell phone

Description automatically generated

PART C:

Firing Rate vs Input Current for Input Current from 2.0 to 5.0 and 0.1 nA step.

A close up of a map

Description automatically generated