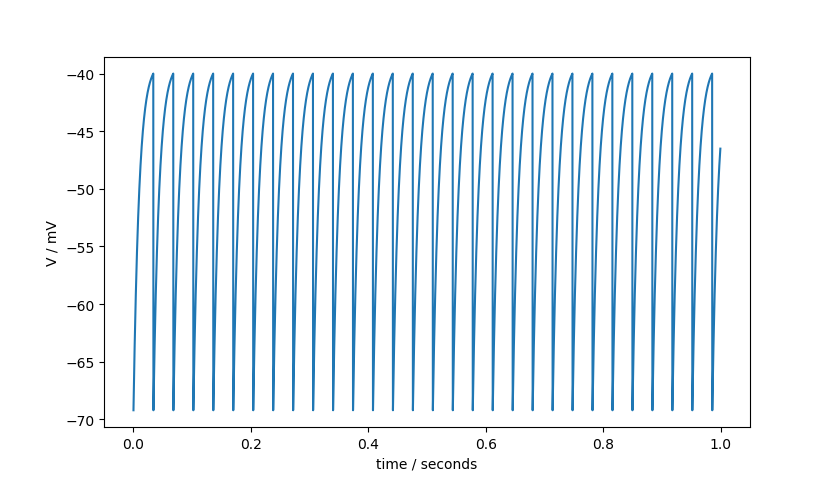
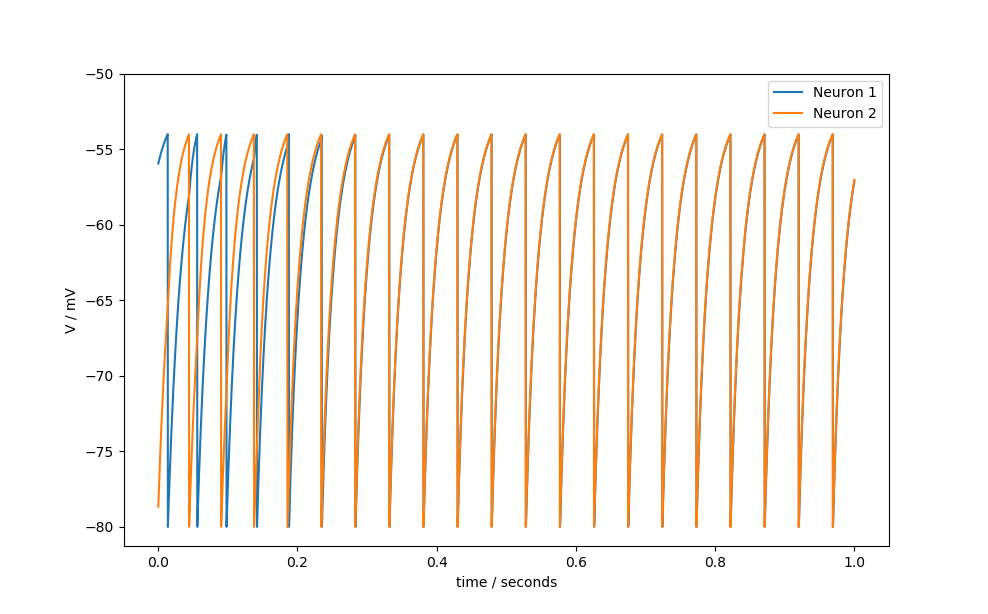
**Part A – Integrate-and-Fire Neurons**

**Question 1**

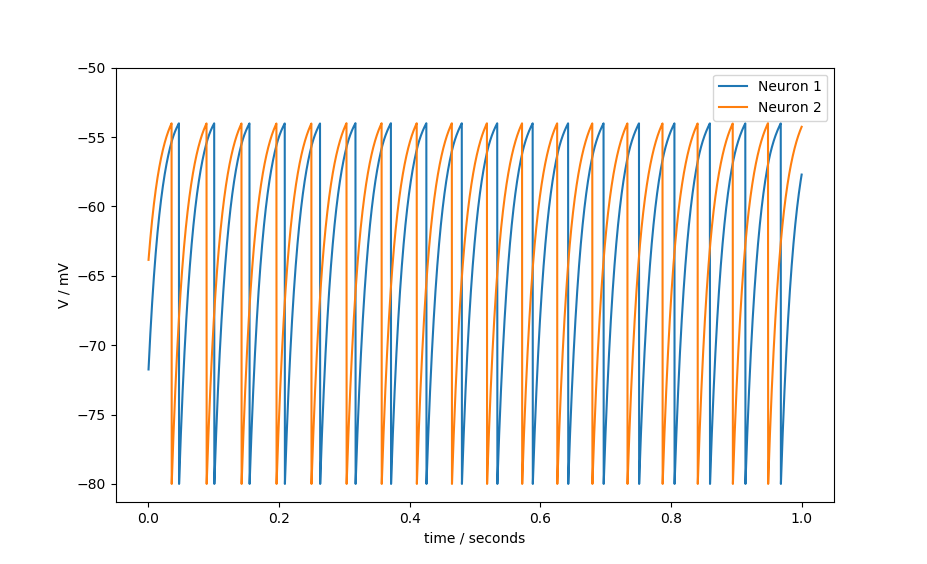


**Question 2**

Es = 0mV :



Es = -80mV :



For the excitatory synapses with Es = 0mV, we see the firing times of the two neurons converge after about o.2 seconds.

For the inhibitory synapses with Es = -80mV, we see the firing times of the two neurons staying independent, and not converging towards each other – with the firing times of the neurons seeming to separate from each other as time progresses.

This behaviour could be due to …