LIF model reading questions

Total points 2/5

The respondent's email (**sankhla.2@iitj.ac.in**) was recorded on submission of this form.

✗ For a short pulse input, the maximum membrane potential depends on (ignore the spiking threshold for now) 0/1

- [ ] Duration of the pulse
- [x] Current ✓
- [x] Total charge transferred ✓

Correct answer

- [x] Duration of the pulse
- [x] Current
- [x] Total charge transferred

✗ For a prolonged constant current input, the maximum membrane potential depends on (ignore the spiking threshold for now) *0/1

- [ ] Duration of the pulse
- [ ] Current
- [x] Total charge transferred ✗

Correct answer

- [x] Current

✗ Which of the following observations are possible if we have a constant current input and a fixed spiking threshold for a neuron? *0/1

- [x] Spikes at a constant frequency ✓
- [x] Spike only once and then go to resting state ✗
- [ ] No spikes

Correct answer

- [x] Spikes at a constant frequency
- [x] No spikes

✓ For fixed threshold, as current is decreased the spiking frequency * 1/1

- ○ Increases
- ◉ Decreases ✓
- ○ Remains constant

✓ For fixed current, as spiking threshold is decreased the spiking frequency *1/1

- ◉ Increases ✓
- ○ Decreases
- ○ Remains constant

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