Quiz 5.4: Neuron as a Filter

Neuron as a filter

0 points possible (ungraded)

A linear (=passive) membrane has a potential given by $u(t) = \sum_f \int dt' f(t-t') \delta(t' - t_k^f) + a$

Suppose the neuronal dynamics are given by $\tau \frac{du}{dt} = -(u - u_{rest}) + q \sum_f \delta(t - t^f)$

- [x] The filter f is exponential with time constant τ. ✔
- [ ] The constant a is equal to the time constant τ.
- [x] The constant a is equal to u_{rest}. ✔
- [x] The amplitude of the filter f is q.
- [ ] The amplitude of the filter f is u_{rest}.

✖

Submit You have used 1 of 1 attempt

Answers are displayed within the problem

Discussion

Topic: Week 5 / Quiz 5.4: Neuron as a Filter

Show Discussion