

Week 3 – Questions – Synaptic transmission

3.1 Synaptic transmission

1. Sketch the structure of a chemical synapse. Indicate relevant length scales.
2. What is meant by quantal release of neurotransmitter?

3.2 Neurotransmitter release

3. What is the dependence of neurotransmitter release upon calcium?
4. Sketch the steps of the synaptic vesicle cycle.

3.3 Presynaptic dynamics

5. What mechanisms are thought to underlie facilitation?
6. What mechanisms are thought to underlie depression?

3.4 Presynaptic modulation

7. What is a metabotropic neurotransmitter receptor?
8. Describe one mechanism of presynaptic inhibition and how it affects short-term presynaptic plasticity.