

**Practice questions:**  
**Action potentials and synapses**

**Key:** a. resting membrane potential      b. depolarization      c. repolarization  
          d. threshold                            e. action potential

1. \_\_\_ Period during which potassium ions move out of the axon through voltage gated channels.
2. \_\_\_ Which potential is equal to  $-70\text{mV}$ ?
3. \_\_\_ This potential is established by sodium and potassium ions seeking equilibrium via passive channels.
4. \_\_\_ This is the voltage required in order to stimulate the opening of voltage gated sodium channels.
5. \_\_\_ Period during which sodium ions move into the axon through voltage gated channels.
6. \_\_\_ Which potential is equal to  $+30\text{mV}$ ?

**True or False?**

7. \_\_\_ A postsynaptic neuron conducts impulses towards the synapse.
8. \_\_\_ Saltatory conduction is much faster than continuous conduction.
9. \_\_\_ Glutamate is an excitatory neurotransmitter in the brain.
10. \_\_\_ Gated ion channels are always open.

Answers: 1. (C) 2. (A) 3. (A) 4. (D) 5. (B) 6. (E) 7. (F) 8. (T) 9. (T) 10. (F)