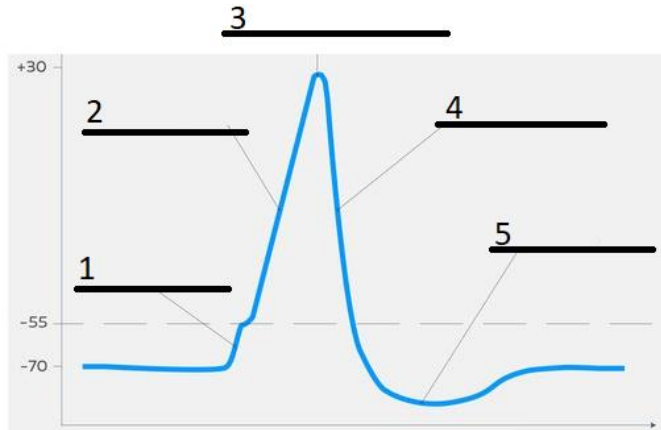




1. Name the numbered phases of the recorded cellular events! (6 points)



1. Na<sup>+</sup> channels open (Na inflow)
2. rising phase/depolarization
3. overshoot/peak
4. falling phase/ repolarization/ K<sup>+</sup> ions out
5. undershoot/ afterhyperpolarization

Condition at which membrane potential fluctuation turns into action potential generation:

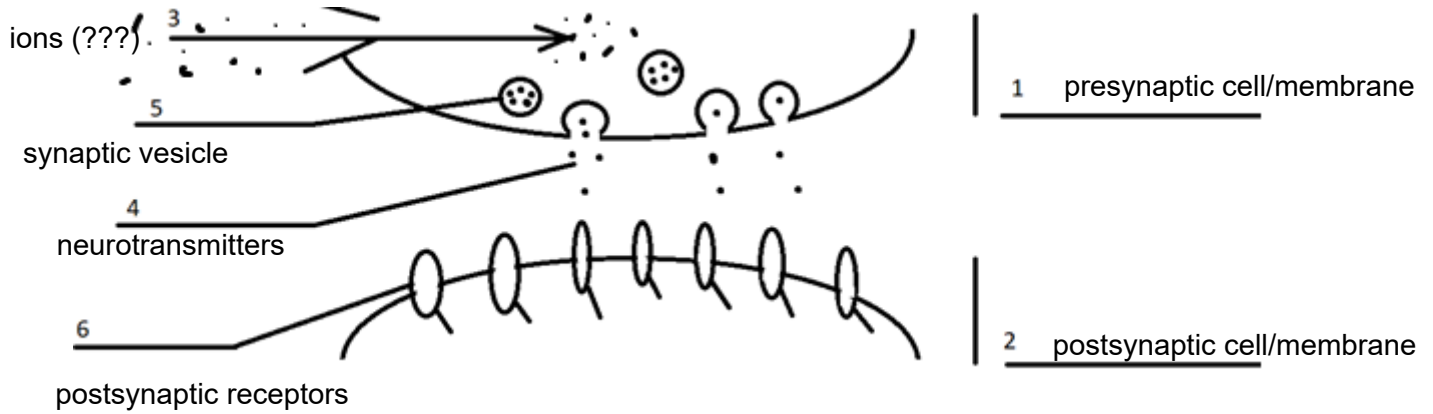
threshold is at -55mV

2. Fill in the missing words! (4 points)

The myelin sheath, that helps the nerve to increase the speed of conductance, is produced by glial cells. The glial cells with this function in the peripheral nervous system are called Schwann cells, whereas the name of the cells with similar function in the central nervous system is oligodendrocyte(s). The glial cells in the peripheral nervous system are capable to embed several neuronal processes (named above). The latter type of nerve fibers is called myelinated fibers/ myelinated axons or non-myelinated fibers.



1. Name the marked structures or cellular events! (6 points)



1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_

2. Fill in the missing words! (4 points)

The filament-like structures conducting the nerve impulses are composed of the axon and the dendrite and called nerve fibers. The axon is part of the neuron; the larger its diameter, the faster is its conductance speed.



# **Basics of Neurobiology**

**Name:**

**2019 Autumn Semester/Seminar 3**

**Score: 10/**

**26/09 – Test 2/B**