2. At which part of a motor neuron is the action potential generated first?

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axon hillock (axon hillock and the initial segment of the axon)

3. Name 3 functions for the supportive cells.

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1. Maintenance of the neural environment.
2. Synthesize and release neurotrophic factors (maintain the survival and protection of neurons)
3. Some cells are supportive cells that produce the myelin sheath.

4. What the myeline sheath is?

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There are specialized cells, They produce the myelin sheath that covers the axon. (myeline a protein lipid complex that insulates nerve fiber) and transmit the signal quickly along the nerve.

5. What type of conduction is found at the myelinated fibers

page 8

Saltatory conduction.

6. If you have 2 unmyelinated fibers one with a small diameter (A fiber) and the other is having a larger diameter (B Fiber), Question: which of them is having a higher velocity of conduction for the impulse? Expalin why??

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(B Fiber) it has less resistance

7. What type of channels can be activated to generate the Inhibitory Post Synaptic Potentials (IPSPs)?

page 11

K^+ channels.

8. What is the difference between Excitatory Post Synaptic Potentials and Action Potentials?

page 10

post synaptic is a small depolarization that can be induced by activation of few Na^+ channel

9. Describe the Temporal Summation

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The one neuron is affected by many stimuli (by one neurons) and it generates many small potentials that together reach the threshold (at different parts of time)

10. Can we record the action potential over an axon by placing the two electrodes at the external surface of the membrane???

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yes we can (biphasic action potential)

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