

Exit Card: Nervous System and Neural Pathways

1. Which of the following is the correct sequence of events during an action potential?

- A. Depolarization → Hyperpolarization → Repolarization
 - B. Hyperpolarization → Depolarization → Repolarization
 - C. Depolarization → Repolarization → Hyperpolarization
 - D. Repolarization → Depolarization → Hyperpolarization
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2. What triggers the release of neurotransmitters from the synaptic vesicles into the synaptic cleft?

- A. Diffusion of sodium ions into the axon
 - B. Binding of neurotransmitters to the presynaptic membrane
 - C. Arrival of an action potential at the synaptic terminal
 - D. Opening of potassium channels in the postsynaptic membrane
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3. Which of the following correctly describes the role of interneurons in the nervous system?

- A. They transmit sensory signals to the effectors.
 - B. They act as a bridge between sensory and motor neurons.
 - C. They generate motor output to muscles or glands.
 - D. They are found exclusively in the peripheral nervous system.
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4. During an action potential, what is the membrane potential when sodium ions rush into the axon?

- A. -70 mV
 - B. -50 mV
 - C. +40 mV
 - D. -90 mV
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5. What happens if the threshold potential is not reached in a neuron?

- A. A smaller action potential is generated.
- B. No action potential occurs.
- C. Neurotransmitters are released but no response follows.
- D. Hyperpolarization occurs immediately.