What is the primary function of a neuron

- A. To regulate blood pressure
- B. To transmit electrical and chemical signals
- C. To produce hormones
- D. To digest food

Answer: B. To transmit electrical and chemical signals

What are the three main parts of a neuron

- A. receptor, neurotransmitter, terminal
- B. soma, synapse, myelin sheath
- C. nucleus, mitochondria, cytoplasm
- D. cell body, dendrites, axon

Answer: D. cell body, dendrites, axon

What is the role of dendrites in a neuron

- A. Produce neurotransmitters
- B. Receive incoming signals
- C. Protect the cell body
- D. Generate action potentials

Answer: B. Receive incoming signals

What is the purpose of the axon in a neuron

- A. To produce neurotransmitters

• B. To transmit electrical signals away from the cell body

• C. To regulate cell division

• D. To store nutrients

Answer: B. To transmit electrical signals away from the cell body

What is the function of the myelin sheath

• A. Regulates blood flow

• B. Stores nutrients for the neuron

• C. Insulates and protects nerve fibers

• D. Transmits electrical signals

Answer: C. Insulates and protects nerve fibers

What is the resting membrane potential of a neuron

• A. -50mV

• B. -40mV

• C. -90mV

• D. -70mV

Answer: D. -70mV

What is the threshold potential

• A. The peak potential during an action potential

• B. The resting potential of a neuron

• C. The membrane potential at which an action potential is triggered

• D. The potential required for neurotransmitter release

Answer: C. The membrane potential at which an action potential is triggered

What is an action potential

- A. Sound produced by vocal cords
- B. Chemical signal in muscles
- C. Temperature of a reaction
- D. Electrical signal in neurons

Answer: D. Electrical signal in neurons

What is the role of neurotransmitters in neuron communication

- A. Control muscle movement
- B. Facilitate communication between neurons
- C. Regulate blood pressure
- D. Maintain bone density

Answer: B. Facilitate communication between neurons

What is synaptic transmission

- A. Sending messages through the bloodstream
- B. Producing hormones
- C. The process by which nerve cells communicate with each other
- D. Creating new brain cells

Answer: C. The process by which nerve cells communicate with each other

What are excitatory neurotransmitters

- A. Neurotransmitters that slow down the firing of neurons.
- B. Neurotransmitters that increase the likelihood of an action potential.
- C. Neurotransmitters that have no effect on neurons.
- D. Neurotransmitters that inhibit neuronal activity.

Answer: B. Neurotransmitters that increase the likelihood of an action potential.

What are inhibitory neurotransmitters

- A. Neurotransmitters that only work in the peripheral nervous system
- B. Neurotransmitters that have no effect on action potentials
- C. Neurotransmitters that increase the likelihood of an action potential
- D. Neurotransmitters that decrease the likelihood of an action potential

Answer: D. Neurotransmitters that decrease the likelihood of an action potential

What is synaptic plasticity

- A. Synaptic plasticity is the ability of synapses to strengthen or weaken over time.
- B. Synaptic plasticity is a type of plastic used in electronics.
- C. Synaptic plasticity is the study of plants.
- D. Synaptic plasticity is a new type of surgery.

Answer: A. Synaptic plasticity is the ability of synapses to strengthen or weaken over time.

What is the difference between afferent and efferent neurons

- A. Afferent neurons control movement, while efferent neurons process sensory information.

• B. Afferent neurons carry motor signals to the brain, while efferent neurons carry sensory information from the brain.

• C. Afferent neurons are located in the brain, while efferent neurons are located in the spinal cord.

• D. Afferent neurons carry sensory information to the brain, while efferent neurons carry motor signals from the brain.

Answer: D. Afferent neurons carry sensory information to the brain, while efferent neurons carry m

What is the role of interneurons in the nervous system

• A. Produce hormones

• B. Regulate heart rate

• C. Store memories

• D. Facilitate communication between sensory and motor neurons

Answer: D. Facilitate communication between sensory and motor neurons

What is the difference between a unipolar, bipolar, and multipolar neuron

• A. Location in the body

• B. Size of the cell body

• C. Function in the nervous system

• D. Number of processes

Answer: D. Number of processes

What is the function of a sensory neuron

• A. To transmit sensory information from the body to the central nervous system

• B. To produce hormones

• C. To process emotions

• D. To regulate muscle movement

Answer: A. To transmit sensory information from the body to the central nervous system

What is the function of a motor neuron

• A. To regulate blood pressure

• B. To produce hormones

• C. To transmit signals from the brain to muscles or glands

• D. To digest food

Answer: C. To transmit signals from the brain to muscles or glands

What is the role of the sodium-potassium pump in maintaining the resting membrane

• A. Regulates cell division

• B. Controls protein synthesis

• C. Produces energy for the cell

• D. Maintains the resting membrane potential by pumping sodium out and potassium in

Answer: D. Maintains the resting membrane potential by pumping sodium out and potassium in

How do neurons communicate with each other at synapses

• A. Through direct physical contact

• B. Through electrical signals

• C. Through release of neurotransmitters

• D. Through hormones

Answer: C. Through release of neurotransmitters