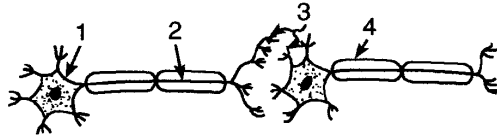


Nervous System Practice Test

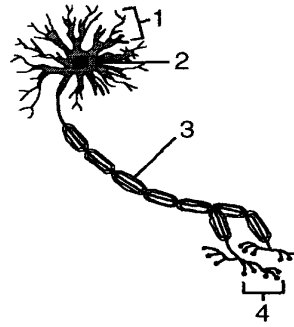
- 1) In the diagram of the two neurons shown below, at which point would a substance that interferes with the action of a neurotransmitter be most effective?



- A) 1 B) 2 C) 3 D) 4
- 2) Animal cells that are specialized for conducting electrochemical impulses are known as
 A) synapses B) neurotransmitters C) nephrons D) neurons
- 3) In humans, which structure is primarily responsible for maintaining balance and coordinating motor activities?
 A) cerebrum B) spinal cord C) cerebellum D) medulla
- 4) A student's ability to think about a question and answer it correctly is directly controlled by the
 A) cerebrum B) spinal cord C) cerebellum D) medulla
- 5) Neurotransmitters, such as acetylcholine, are initially detected by which part of a neuron?
 A) terminal branch B) nucleus C) dendrite D) mitochondrion
- 6) Which *best* illustrates the pathway of an impulse in a reflex arc?
 A) receptor → motor neuron → associative neuron → sensory neuron → effector
 B) effector → sensory neuron → associative neuron → motor neuron → receptor
 C) effector → motor neuron → associative neuron → sensory neuron → receptor
 D) receptor → sensory neuron → associative neuron → motor neuron → effector
- 7) A student accidentally places her hand on a tack and quickly pulls her hand away. The tack represents
 A) a response B) a stimulus C) an impulse D) an effector
- 8) Which is the first structure stimulated in a reflex arc?
 A) motor neuron B) effector C) interneuron D) receptor
- 9) Which homeostatic adjustment does the human body make in response to an increase in environmental temperature?
 A) increase in urine production C) increase in the production of perspiration
 B) storage of fats to provide insulation D) secretion of insulin to decrease blood glucose levels
- 10) The space between two adjacent neurons is known as a
 A) linkage B) joint C) synapse D) dendrite

Nervous System Practice Test

11) The diagram below represents a neuron.



Which number indicates an area where a stimulus is detected and an electrochemical impulse is conducted to the cyton?

- A) 1 B) 2 C) 3 D) 4

12) Which process requires the expenditure of cellular energy?

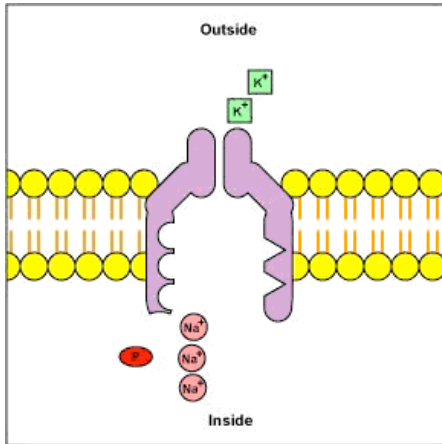
- A) diffusion B) passive transport C) active transport D) osmosis

13) For each statement, select the human system that is *best* described by the statement.

This system includes the spinal cord, medulla, and neurons.

- A) excretory B) nervous C) endocrine D) respiratory

Questions #14 & #15 refer to the graphic of the sodium potassium pump

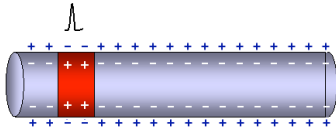


14. The graphic refers to a section of a
 A. organ system B. cell membrane C. synapse D. reflex arc

15. The purpose of the pump in a neuron is to
 A. pump out sodium ions / pump potassium ions in
 B. pump out potassium ions / pump sodium ions in
 C. keep sodium & potassium ions in equal concentrations on both sides of the cell membrane
 D. pump excess water out

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Question #16 & #17 refers to the graphic



16. The above represents

- A. an action potential (electrical impulse) traveling down a nerve cell
- B. a reflex arc
- C. a synapse
- D. an extension cord

17. The charges on the inside & outside of the cell are the result of

- A. osmosis
- B. the concentration of different ions
- C. neurotransmitters outside the cell membrane
- D. phospholipids

Answers

- 1. C
- 2. D
- 3. C
- 4. A
- 5. C
- 6. D
- 7. B
- 8. D
- 9. C
- 10. C
- 11. A
- 12. C
- 13. B
- 14. B
- 15. A
- 16. A
- 17. B

Nervous System Practice Test