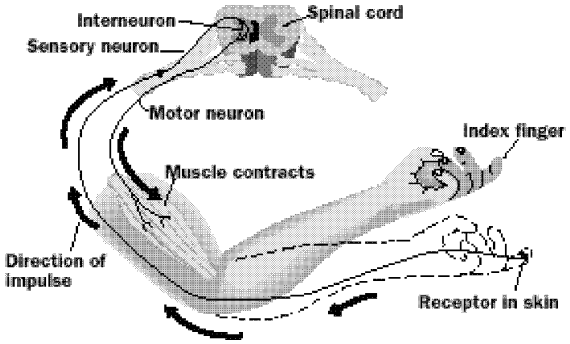
**Nervous System Practice Test**

**Name:** _____ **Date:** _____

1. Use the following diagram to answer the question.




When an index finger is hit by a hammer, an advantage of the reflex arc is that nerve impulses

A. do not need to travel to the brain first.

B. travel quickly to the brain.

C. travel faster across nerve end gaps.

D. activate sensory organs.

2. Which of the following is the basic structural unit of the nervous system?

A. axon B. neuron

C. red blood cell D. white blood cell

3. Which of the following body systems is responsible for receiving stimuli from the environment and coordinating the body's response to these stimuli?

A. respiratory system B. nervous system

C. digestive system D. circulatory system

4. The diagrams below illustrate different levels of organization in the human nervous system. An understanding of how the nervous system works at its various levels helps doctors explain normal body functions and make proper diagnoses when patients are sick.

**Diagram 1**

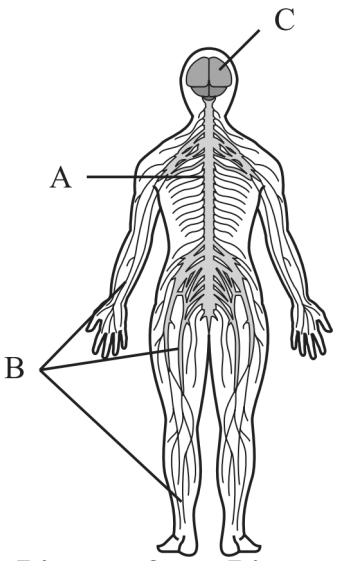
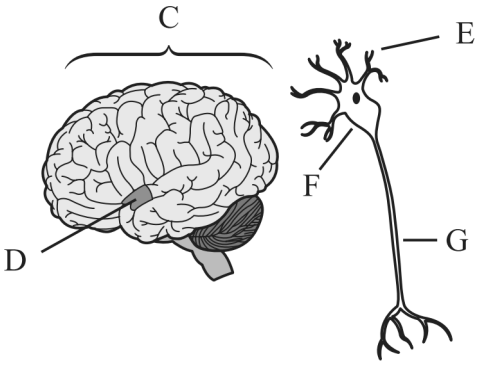



**Diagram 2** **Diagram 3**




Which of the following statements *best* describes the role of structure C in the nervous system?

A. Structure C is the basic unit of the nervous system.

B. Structure C produces reflex responses in the arms and legs.

C. Structure C is the main center for sensory and motor processing.

D. Structure C transmits impulses from sense organs to the central nervous system.

5. Which of the following would be the *most likely* effect of severe injury to the lower region of structure A?

   A. loss of sight

   B. paralysis of the legs

   C. restricted blood flow

   D. slowed reflexes in the arms

6. Nerve cells use which of the following to communicate with each other?

   A. antibodies

   B. electrochemical signals

   C. enzymes

   D. simple sugars

7. What is the role of sensory organs in the body?

   A. the transmission of impulses directly to effectors

   B. the detection of environmental stimuli

   C. the conduction of impulses from the spinal cord

   D. the interpretation of impulses from motor neurons

8. Which is an example of an effector?

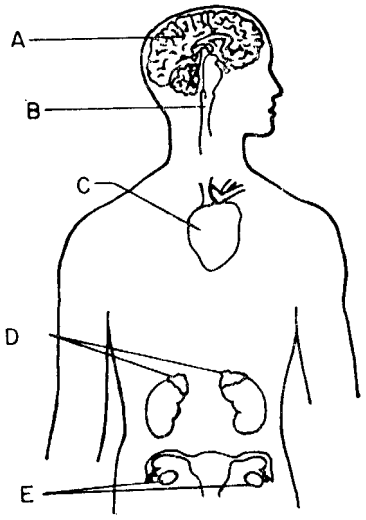
   A. a taste bud of the tongue

   B. the auditory nerve of the ear

   C. the retina of the eye

   D. a muscle of the arm

9. An inflammation of structures covering *A* and *B* results in a malfunction of the nervous system which is known as




   A. anemia  B. stroke

   C. meningitis  D. goiter

10. The breathing rate of a human increases following rapid exercise. The part of the nervous system that controls this involuntary action is the

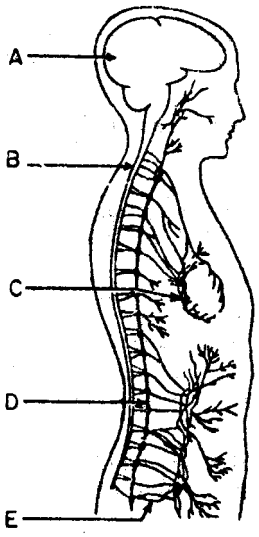
   A. cerebrum  B. cerebellum

   C. medulla  D. spinal cord

11. A stroke occurs in the area indicated by

   A. *A*  B. *B*

   C. *C*  D. *D*



12. In humans, impulses that control that voluntary muscles of the skeleton travel along the nerves of the

A. somatic system B. autonomic system

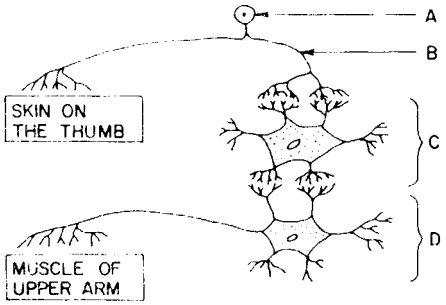
C. lymphatic system D. immune system

13. Nerve impulses are carried from the spinal cord to the muscles of the arm by

A. sensory neurons B. tendons

C. motor neurons D. ganglia

14. Which statement best describes the skin on the thumb as represented in the diagram of a simple nerve pathway in the human body?




A. It contains receptors that interpret stimuli.

B. It contains receptors that detect stimuli.

C. It is an effector that interprets stimuli.

D. It is an effector that detects stimuli.

15. An interneuron is represented by

A. *A* B. *B* C. *C* D. *D*

16. A man suffers a head injury in a car accident. For several days afterward, he has difficulty remembering phone numbers. This loss of memory results from damage to the man's

A. cerebrum B. cerebellum

C. medulla D. spinal cord

## Achoo!

Most sneezing bouts are caused by nasal irritation. Viruses, bacteria, and inhaled irritants such as pepper, dust, and pollen are common causes. In some people, looking at a bright light can cause sneezing; this is known as the photic response.

Sneezing usually begins when receptors in the interior of the nose are stimulated. A message is carried by a nerve to a reaction of the midbrain which in turn, stimulates blood vessels to dilate and mucous glands to increase their activity. Other impulses go to the respiratory center in the medulla, causing it to stimulate inhalation. As soon as inhalation is complete, muscles encircling the top of the airway of the victim temporarily constrict. The nose and mouth are momentarily sealed off from the rest of the respiratory passages. Then the process of exhalation begins. As the diaphragm and abdominal muscles contract, pressure builds until the seal is forced open and air explodes out in a sneeze.

A sneeze that originates with an irritation of the nose can be explained by this process, but in the case of a sneeze caused by a bright light, unidentified portions of the brain seem to be involved in producing the photic response. This response appears to be inherited and is present in approximately 20% of the population.

17. Which region of the nervous system contains the respiratory center?

A. cerebrum
B. medulla
C. cerebellum
D. spinal cord

18. The impulses involved in sneezing would most likely follow which pathway

A. motor neuron → interneuron → sensory neuron
B. motor neuron → sensory neuron → interneuron
C. sensory neuron → interneuron → motor neuron
D. sensory neuron → motor neuron → interneuron

19. Select the malfunction, *chosen from the list below*, that is best described by the statement shown.

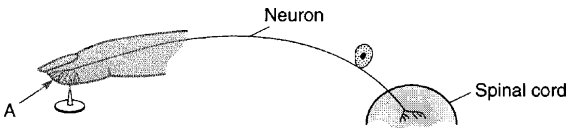
A group of congenital diseases that affect motor functions

A. Cerebral palsy
B. Angina pectoris
C. Anemia
D. Meningitis

20. Which part of the human central nervous system is correctly paired with its function?

A. spinal cord - coordinates learning activities
B. cerebellum - serves as the center for reflex actions
C. cerebrum - serves as the center for memory and reasoning
D. medulla - maintains muscular coordination

21. A portion of a reflex arc is represented in the diagram




The function of structure A is to

A. synthesize neurotransmitters
B. detect changes in the external environment
C. carry messages away from the central nervous system
D. directly initiate an impulse in an effector

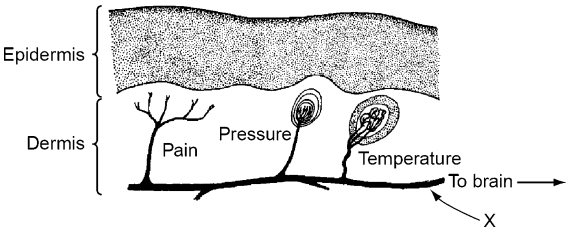
22. A change in the external environment that initiates an impulse is known as a

A. synapse
B. response
C. stimulus
D. receptor

23. If a motor neuron involved in a reflex arc is damaged, which event in that arc is *least* likely to occur?

A. contraction of a muscle
B. stimulation of an interneuron
C. reception of a stronger stimulus by the sense organ
D. secretion of a neurotransmitter by the sensory neuron

24. Three types of skin receptors are represented in the accompanying diagram. Structure X is most likely




A. a sensory nerve
B. an effector
C. a ganglion
D. a tympanum

25. The peripheral nervous system consists of the

A. neurons located in the brain and spinal cord

B. nerves that extend from the brain and spinal cord

C. interneurons of the central nervous system

D. portions of the brain known as the medulla and cerebellum

26. In humans, one function of an interneuron is to relay impulses directly from

A. receptors to the brain

B. receptors to other receptors

C. motor neurons to receptors

D. a sensory neuron to a motor neuron

Nervous System Practice Test 2/18/2020

1.
Answer:
Points: 1

2.
Answer: B
Objective: MA 4.4
Points: 1

3.
Answer: B
Objective: MA 4.4
Points: 1

4.
Answer: C
Objective: MA 4.4
Points: 1

5.
Answer: B
Objective: MA 4.4
Points: 1

6.
Answer: B
Objective: MA 2.8
Points: 1

7.
Answer: B
Points: 1

8.
Answer: D
Points: 1

9.
Answer: C
Points: 1

10.
Answer: C
Points: 1

11.
Answer: A
Points: 1

12.
Answer: A
Points: 1

13.
Answer: C
Points: 1

14.
Answer: B
Points: 1

15.
Answer: C
Points: 1

16.
Answer: A
Points: 1

17.
Answer: B
Points: 1

18.
Answer: C
Points: 1

19.
Answer: A
Points: 1

20.
Answer: C
Points: 1

21.
Answer: B
Points: 1

22.
Answer: C
Points: 1

23.
Answer: A
Points: 1

24.
Answer: A
Points: 1

25.
Answer: B
Points: 1

26.
Answer: D
Points: 1