

Study Guide

CHAPTER 33

Section 1: Structure of the Nervous System

In your textbook, read about neurons.

Use each of the terms below only once to complete the passage.

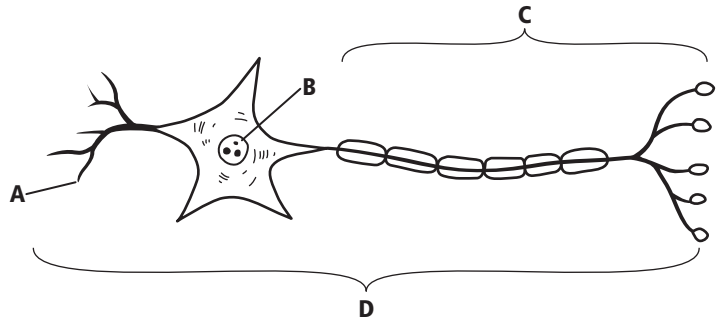
- | | | | | |
|------------------|--------------|---------------|-------------------|-------------|
| action potential | axon | chemicals | electrical charge | electricity |
| impulses | interneurons | motor neurons | sensory neurons | three |

There are three major parts to a neuron. These parts are the cell body, dendrites, and (1) _____. There are (2) _____ basic types of neurons. These types include (3) _____, (4) _____, and (5) _____. A nerve impulse is a(n) (6) _____ and is called a(n) (7) _____. Neurons use (8) _____ and (9) _____ to send (10) _____.

In your textbook, read about neurons.

Refer to the illustration below. Match the parts of the illustration with the terms or phrases below. Write the letter of the correct part. Letters may be used more than once.

- _____ 11. nucleus
- _____ 12. axon
- _____ 13. dendrite
- _____ 14. part that receives messages
- _____ 15. part that sends messages
- _____ 16. neuron



In your textbook, read about speed of an action potential and the synapse.

For each statement below, write true or false.

- _____ 17. Gaps in the myelin sheath of an axon are called nodes.
- _____ 18. All neurons have myelin.
- _____ 19. A synapse is the distance between the dendrites of two neurons.
- _____ 20. Neurotransmitters help to create new action potential.

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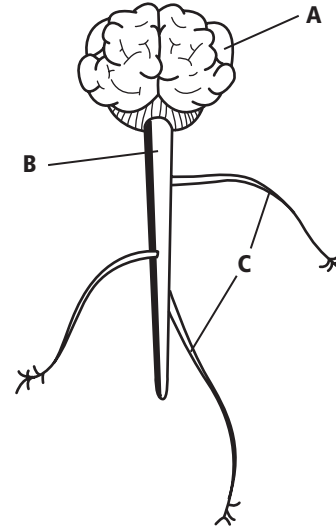
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Section 2: Organization of the Nervous System

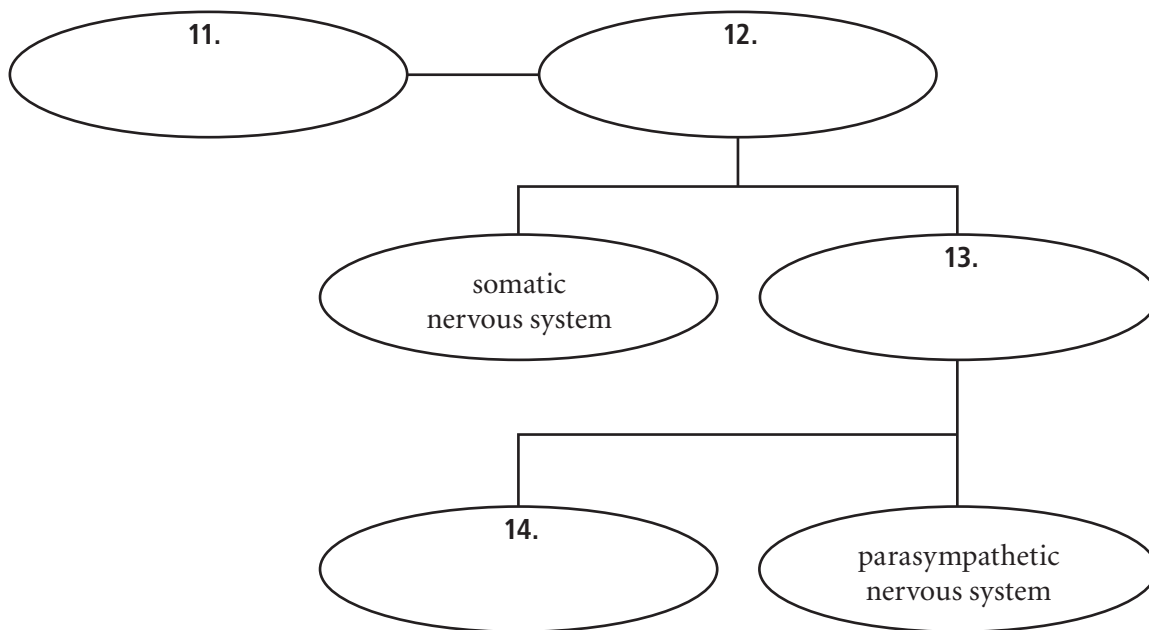
In your textbook, read about the central nervous system.

Refer to the illustration of the brain and spinal cord. Write the correct letter to identify the structure being described. Letters may be used more than once.

- _____ 1. sends and receives messages from all parts of the body
- _____ 2. protected by the vertebrae
- _____ 3. protected by the skull
- _____ 4. carries messages from skin to spinal cord
- _____ 5. spinal cord
- _____ 6. body nerves
- _____ 7. cerebrum is its largest part
- _____ 8. described as a nerve column
- _____ 9. 31 pairs of nerves extend from it
- _____ 10. more than 100 billion neurons are found here



Complete the graphic organizer about the central nervous system. These terms may be used more than once: autonomic nervous system, central nervous system, peripheral nervous system, sympathetic nervous system.



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Section 3: The Senses

In your textbook, read about the senses.

Match the description in Column A with the term in Column B.

Column A	Column B
_____ 1. respond to temperature, pressure, and pain	A. taste buds
_____ 2. specialized chemical receptors on the tongue	B. sensory receptors
_____ 3. transmit information about body position	C. rods
_____ 4. light-sensitive cells	D. cochlea
_____ 5. filled with fluid and lined with hair cells	E. semicircular canals

In your textbook, read about sight.

Complete the table by filling in the missing information. Use these choices:

cones	cornea	lens	retina	rods
-------	--------	------	--------	------

Function	Structure
Projects image onto the retina	6.
Contains receptor cells called rods and cones	7.
Is the structure through which light first enters the eye	8.
Excited by low levels of light	9.
Provide information about color to the brain	10.

In your textbook read about hearing and balance.

Use each of the terms below only once to complete the passage.

- | | | | |
|----------------|----------------|----------|---------|
| auditory canal | balance | cochlea | hearing |
| middle ear | nerve impulses | tympanum | |

Two major functions of the ear are (11) _____ and (12) _____. Sound waves enter the (13) _____ and cause the (14) _____ to vibrate. The vibrations travel through the bones of the (15) _____ and cause fluid in the (16) _____ to vibrate. Hair cells then generate (17) _____ that are transmitted to the brain.

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Section 4: Effects of Drugs

In your textbook, read about classes of commonly abused drugs.

Complete the table by filling in the missing information.

Drug	Common Examples of Drug and Description of Drug's Effects
Nicotine	1. _____ _____ _____ _____ _____ _____
Caffeine	2. _____ _____ _____ _____ _____ _____
Alcohol	3. _____ _____ _____ _____ _____ _____
Inhalants	4. _____ _____ _____ _____ _____ _____