

**SECTION 50-1 REVIEW**

# CENTRAL NERVOUS SYSTEM

**VOCABULARY REVIEW** Explain the relationship between the terms in each of the following groups of terms.

1. cerebral hemispheres, corpus callosum \_\_\_\_\_  
\_\_\_\_\_
2. central nervous system, brain, spinal cord \_\_\_\_\_  
\_\_\_\_\_
3. axon, white matter \_\_\_\_\_  
\_\_\_\_\_
4. motor neuron, efferent neuron \_\_\_\_\_  
\_\_\_\_\_
5. thalamus, hypothalamus, diencephalon \_\_\_\_\_  
\_\_\_\_\_

**MULTIPLE CHOICE** Write the correct letter in the blank.

- \_\_\_\_\_ 1. Each cerebral hemisphere is divided into
  - a. four lobes.
  - b. right and left halves.
  - c. the cerebral cortex and the corpus callosum.
  - d. All of the above
  
- \_\_\_\_\_ 2. Which of the following is *not* a component of the lower brain stem?
 

a. midbrain	c. medulla oblongata
b. thalamus	d. pons
  
- \_\_\_\_\_ 3. The central nervous system is protected from injury by the
 

a. pia mater.	c. arachnoid layer.
b. dura mater.	d. All of the above
  
- \_\_\_\_\_ 4. The cell bodies of neurons are located within the
 

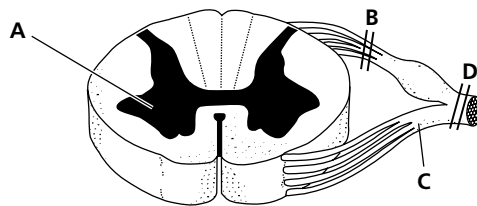
a. ventricles.	b. nerves.	c. corpus callosum.	d. gray matter.
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- \_\_\_\_\_ 5. Dorsal roots consist of
 

a. efferent neurons.	b. motor neurons.	c. afferent neurons.	d. cerebrospinal fluid.
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**SHORT ANSWER** Answer the questions in the space provided.

1. Describe the function of the limbic system. \_\_\_\_\_  
\_\_\_\_\_
2. What are the four major lobes of the brain? \_\_\_\_\_  
\_\_\_\_\_
3. How are the meninges and cerebrospinal fluid related? \_\_\_\_\_  
\_\_\_\_\_
4. What kind of information is carried in the ventral roots of the spinal cord? \_\_\_\_\_  
\_\_\_\_\_
5. **Critical Thinking** Suggest a scientific method that would enable researchers to study the functions of a specific structure or region of the central nervous system.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**STRUCTURES AND FUNCTIONS** Use the figure below of a cross section of the spinal cord with a spinal nerve to answer the following questions.



1. Which of the identified structures contains cell bodies of neurons? \_\_\_\_\_
2. How would cutting at point B affect the functioning of the central nervous system?  
\_\_\_\_\_  
\_\_\_\_\_
3. How would cutting at point D affect the functioning of the central nervous system?  
\_\_\_\_\_  
\_\_\_\_\_