

NERVOUS SYSTEM DIAGRAMS!!!!

Name: _____

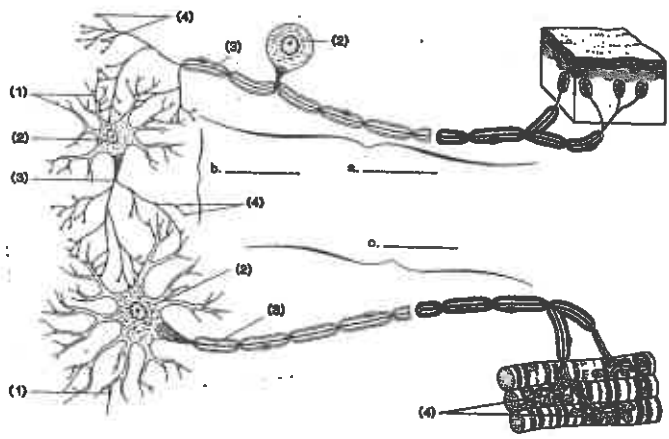
1. In the diagram below, label a, b, and c as either the motor neuron, interneuron, or sensory neuron.

a) All the parts labeled #1 in the diagram below are called dendrites
 Their function is to: carry impulses to the cell body

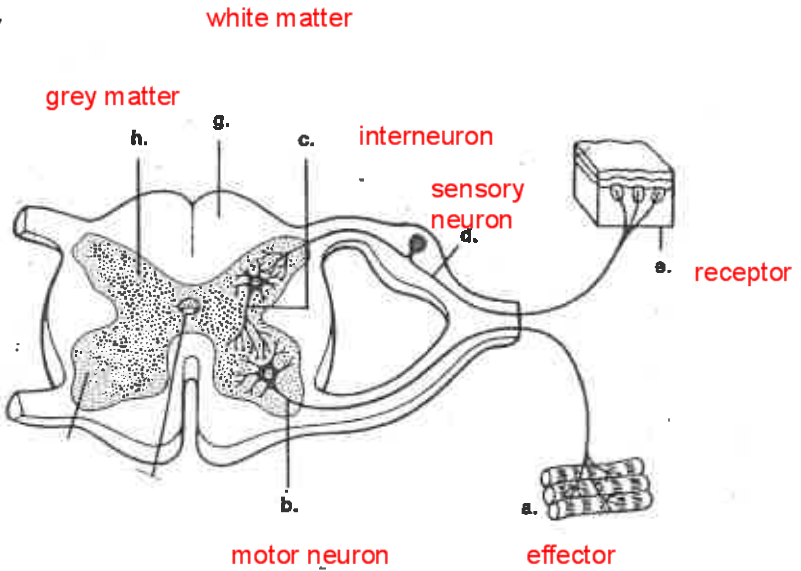
b) All the parts labeled #2 in the diagram below are called cell body
 Their function is to: contains nucleus & coordinates function

c) All the parts labeled #3 in the diagram below are called axon
 Their function is to: carry impulses away from cell body

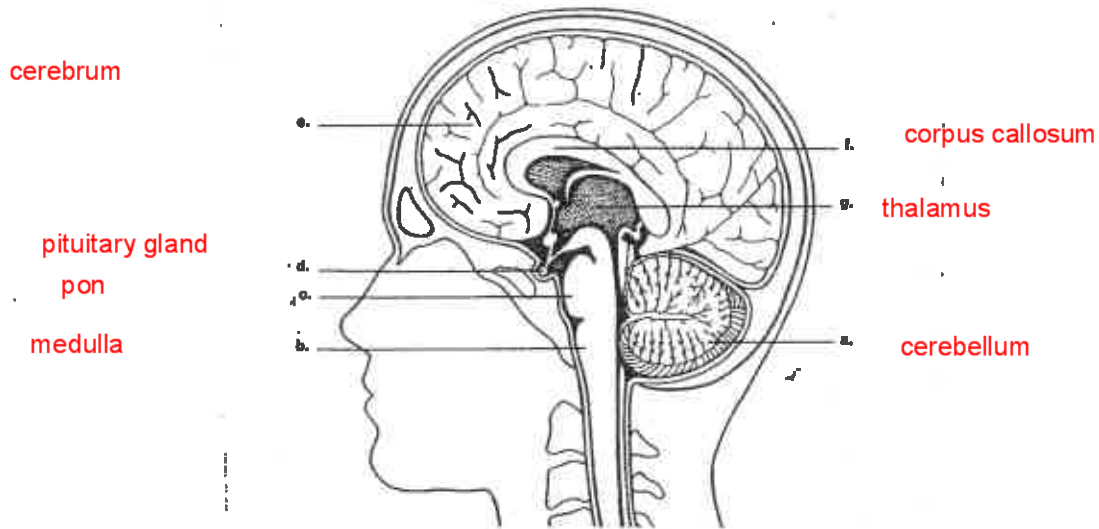
d) All the parts labeled #4 in the diagram below are called axon terminal
 Their function is to: release neurotransmitters



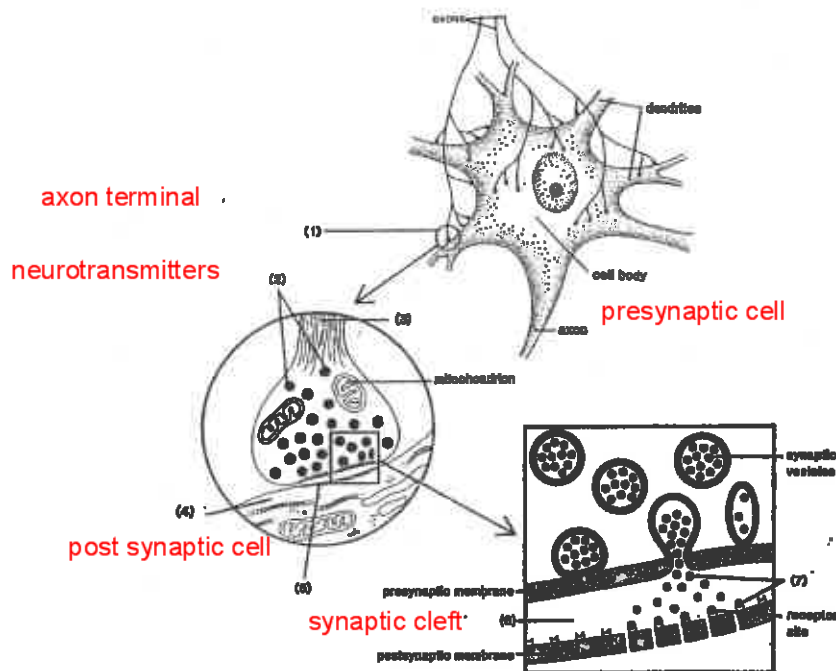
2. Label the following diagram of the reflex arc. Draw arrows to indicate the pathway of the nerve impulse.



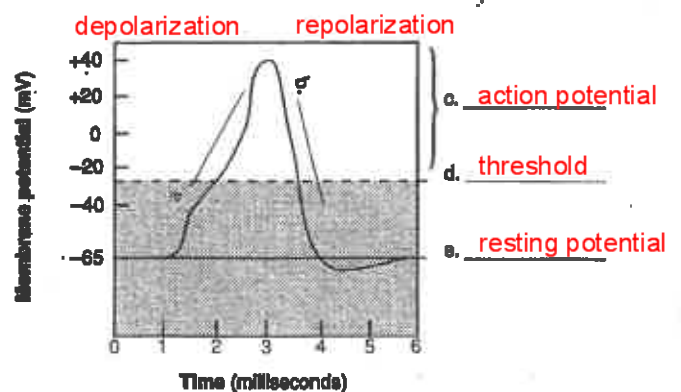
3. Label this drawing of the brain.



4. Transmission across a synapse. Label the numbered parts in the diagram below.



5. This drawing shows a trace that appears on the oscilloscope screen when a nerve impulse is stimulated. At each letter, label the diagram using the following terms: action potential, resting potential, threshold, sodium gates open, potassium gates open, depolarization, and repolarization. Some letters may have more than one term used.



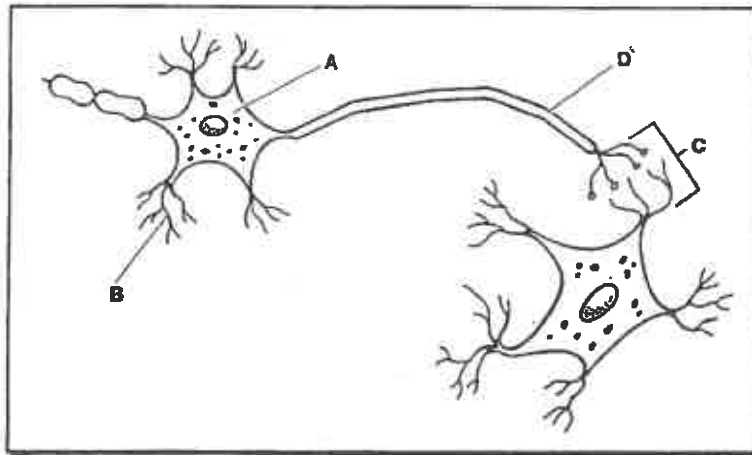
THE NERVOUS SYSTEM

KEY CONCEPTS

- The nervous system receives and sends out information about activities within the body. It also monitors and responds to changes in the environment.
- When a nerve impulse travels along a neuron or from one neuron to another, it does so in the form of electrical and chemical signals.

Part A:

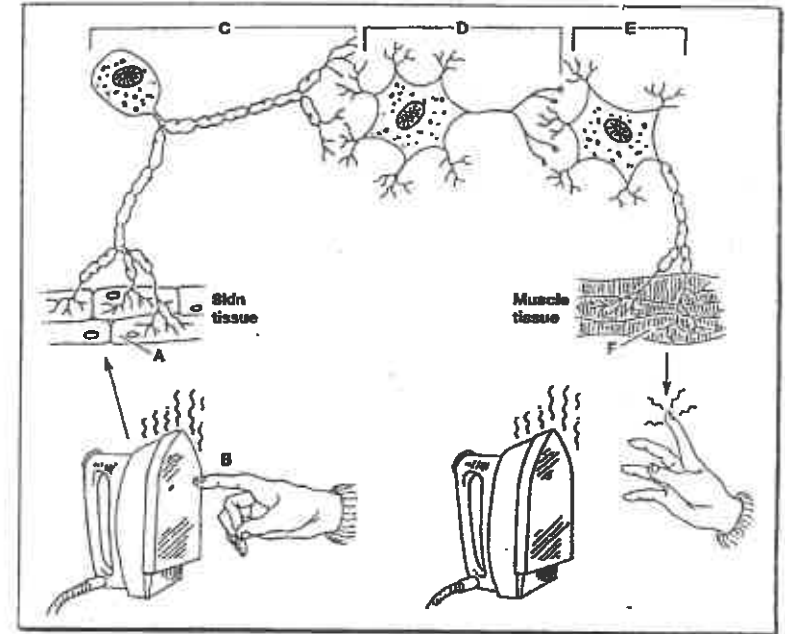
In the space provided before the description, write the letter of the structure to which it corresponds. In the space provided after the description, identify the structure.



- | | | |
|--------------|---|----------------------|
| <u> c </u> | 1. Tiny gap between two neurons. | <u> synapse </u> |
| <u> a </u> | 2. Largest part of a neuron. | <u> cell body </u> |
| <u> d </u> | 3. Carries messages away from the central part of a neuron. | <u> axon </u> |
| <u> b </u> | 4. Carries messages to the central part of a neuron | <u> dendrites </u> |

Part B:

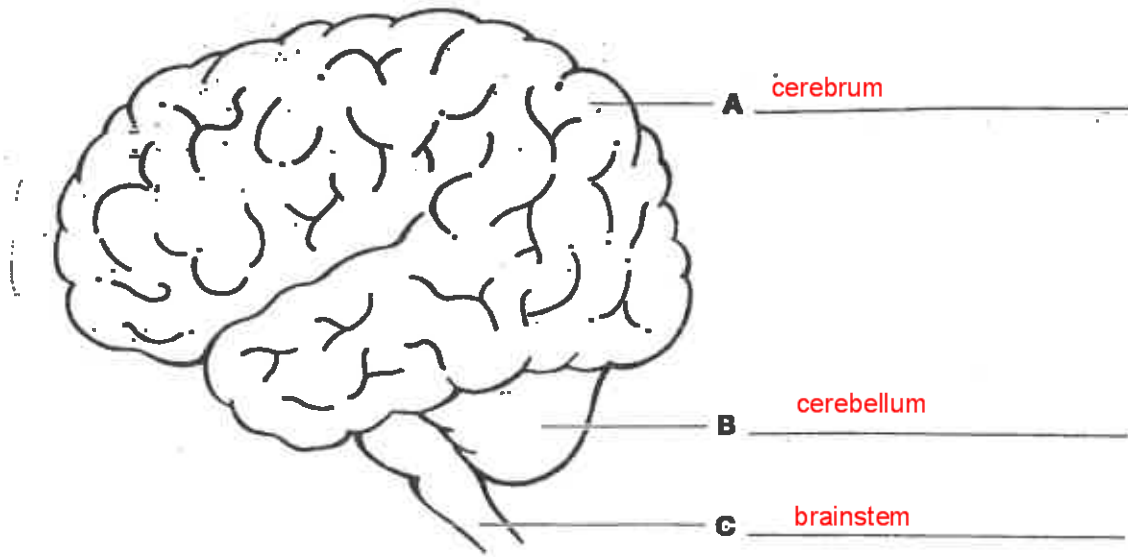
Match each lettered item on the diagram with the correct term.



- | | | | |
|--------------|-------------------|--------------|----------------|
| <u> f </u> | 1. Effector | <u> d </u> | 2. Interneuron |
| <u> e </u> | 3. Motor neuron | <u> a </u> | 4. Receptor |
| <u> c </u> | 5. Sensory neuron | <u> b </u> | 6. Stimulus |

Part C:

Label the parts of the brain on the diagram. Then write the letter of the part that controls each of the activities listed.



 a 1. Learning and judgement

 b 2. Smoothness of movement

 c 3. Heartbeat and blood pressure

 a 4. Attitudes and emotions

 b 5. Balance

 a 6. Artistic and mathematical abilities

 c 7. Breathing

 a+b 8. Voluntary movements

Part D: Central and Peripheral: Understanding the Main Ideas

Write C next to each item that describes the central nervous system. Write P next to each item that describes the peripheral nervous system.

 p 1. Contains the nerves of the autonomic nervous system

 c 2. Consists of the brain and spinal cord

 c 3. Interprets information from all parts of the body

 c+p 4. Transmits and receives messages

 c 5. Is the control center of the body

 p 6. Comes into direct contact with the environment

 p 7. Contains pairs of nerves that connect to organs of the body