Topic: Introduction to Nervous System

*Check Your Understanding*

*Refer to your Nervous System PowerPoint note and Section 9.1 of the Biology 12 textbook (pgs 412-417). Answer the following questions in the space provided to check your understanding of the nervous system.*

1. Which two systems control the actions of the body?
2. In one sentence, identify the key role of the nervous system in maintaining homeostasis.
3. In our review of homeostasis, we reviewed the important roles of the monitors, regulators and the coordinating center to bring the body back to homeostasis. Explain how the brain, sensory, and motor neurons act as these components when:
   1. An individual puts their hand on a hot stove.
   2. An individual hears the alarm clock go off.
4. For each of the scenarios above, is the feedback system used a negative or positive? Explain. *(If you can’t recall this, look at your homeostasis ppt notes!)*
5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_ , \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are all functions of the human nervous system.
6. *Describe* the difference between a nerve and a neuron.
7. Fill in the missing labels the main divisions of the nervous system.
8. *Describe* the differences between a sensory neuron and a motor neuron?
9. *Describe* the difference between the CNS and the PNS.
10. Why are the nodes of Ranvier crucial in message transmission?
11. Multiple Sclerosis is caused by the destruction of the myelin sheath that surrounds nerve axons. The myelinated nerves in the brain and spinal cord are gradually destroyed as the myelin sheath hardens and forms plaques. What function will be inhibited from this disease? What side effects may an individual experience as a result?
12. A person is taking a cookie sheet out of the oven and accidently touches the top of the stop with their wrist. The skin receptors in the area acknowledges this stimulus and needs to send a electrochemical message to alert the coordinator center. Pretend you are this message and describe the journey it will take to tell the brain and tell the arm to move. *In your explanation, include sensory neuron, motor neuron, interneuron, brain, spinal cord, central nervous system and peripheral nervous system.*

My understanding of the nervous system so far is: (circle one)

