Do Now # 3.8

Name: _____

1) Select the human system (organ system) that is *best* described by the statement below.

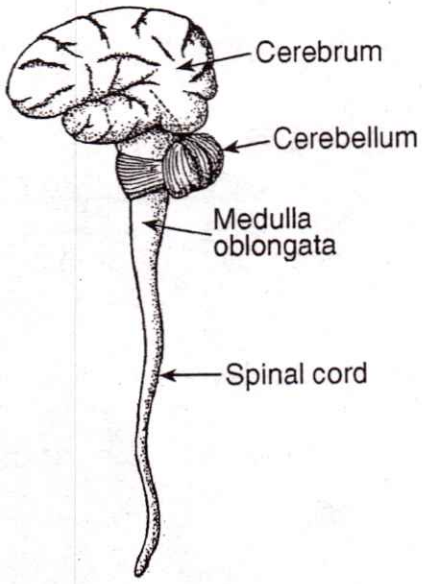
This system includes the spinal cord, medulla, and neurons.

A) Respiratory
B) Endocrine
C) Excretory
D) Nervous

2) Major divisions of the human nervous system are

A) brain and the spinal cord.
B) central nervous system and peripheral nervous system.
C) brain and central nervous system.
D) brain and the autonomic system.

Questions 3 through 5 refer to the following:



3) Which of the following types of functions does the medulla oblongata control?

A) Involuntary
B) Voluntary
C) All bodily functions
D) None of the above

4) What structure in the given diagram coordinates movement?

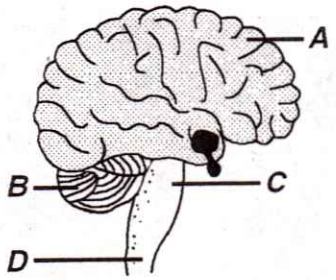
A) Medulla
B) Spinal cord
C) Cerebellum
D) Cerebrum

5) In which structure in the given diagram is the cerebral cortex located? (look at diagram, left side)

A) Spinal cord
B) Medulla
C) Cerebellum
D) Cerebrum

Questions 6 through 9 refer to the following:

The diagram below illustrates different regions of the human brain.



6) In the given diagram, which number indicates the region of the human brain that maintains balance and coordinates motor activities?

A) *A*
B) *B*
C) *C*
D) *D*

7) In the given diagram, which number indicates the region of the human brain that controls reasoning, emotion, and memory?

A) *A*
B) *B*
C) *C*
D) *D*

8) In the given diagram, which number indicates the region of the human brain that is responsible for autonomic functions such as breathing?

A) *A*
B) *B*
C) *C*
D) *D*

9) Which part of the brain in the given diagram is used to control the involuntary movements of the digestive system?

A) *A*
B) *B*
C) *C*
D) *D*

10. Which cell organelle acts like a brain?

_____

Name:

Homework # 3.8

Base your answers to questions **1** through **5** on the reading passage below and on your knowledge of biology.

Polio Vaccines

Polio is a disease that results in the destruction of nerve cells. The first vaccine against polio was developed by Jonas Salk and was made from polio viruses that were killed using the chemical formalin. In 1953, Salk tested the vaccine on himself, his wife, and his three sons. The vaccine was found to be safe and seemed to work. In 1954, more than 1.8 million schoolchildren were part of a trial to test the vaccine, and in April 1955, the vaccine was declared to be safe and effective.

Albert Sabin also developed a vaccine against polio. The vaccine developed by Sabin was made from weakened polio viruses. While the Salk vaccine had to be injected, the Sabin vaccine was administered orally on a cube of sugar.

Both vaccines were found to be effective in protecting people against polio because these vaccines stimulate immune responses involving antibody production. However, the Sabin vaccine is effective over a longer period of time and is easier to administer. Together, these vaccines have nearly eliminated polio in many parts of the world.

1. Which statement about the Salk vaccine is correct?
   (1) Dead viruses are injected.
   (2) Antibodies are injected.
   (3) Antibodies are administered orally.
   (4) Sugar cubes are administered orally.

2. Using one or more complete sentences, explain how the Salk and Sabin vaccines provide protection against polio.

3. Using one or more complete sentences , state how the Salk vaccine was produced.

4. Using one or more complete sentences, state one reason the Sabin vaccine was used more frequently than the Salk vaccine.

5. Using one or more complete sentences, explain why the polio virus often causes paralysis of the muscles.