

Name: \_\_\_\_\_

### Do Now # 3.7

- 1 A new vaccine was developed and then tested on a large sample of individuals. This new vaccine will be considered effective if it helps prepare the body to fight future invasion by
    - (1) inhibiting the response of red blood cells
    - (2) stimulating the reproduction of microbes
    - (3) inhibiting the action of immune cells
    - (4) stimulating the production of antibodies
  
  - 2 Single-celled organisms are able to maintain internal stability because they
    - (1) have multiple organ systems
    - (2) work with other cells
    - (3) contain structures that perform life functions
    - (4) carry out photosynthesis to produce food
  
  - 3 A similarity between humans and many other multicellular animals is that they
    - (1) occupy the same niche in most food webs
    - (2) are composed of organ systems
    - (3) have the same DNA sequences
    - (4) carry out autotrophic nutrition
  
  - 4 In order to enter cells and be useful to the body, starch must be
    - (1) absorbed through the skin
    - (2) broken down into fats and water
    - (3) digested into simple sugars
    - (4) converted to carbon dioxide and ATP
  
  - 5 Cells of the immune system are able to respond to the presence of invading organisms because they recognize the
    - (1) antigens present on the invaders
    - (2) antibodies present in invading pathogens
    - (3) DNA pattern in the nuclei of viruses
    - (4) antibiotics released from microbes
6. DNA is able to control cellular activities most directly by regulating the process of
    - (1) meiotic division
    - (2) protein synthesis
    - (3) active transport
    - (4) selective breeding

\* catalyst = can also break down food
  
  7. One effect of uncontrolled diabetes is that the blood might develop an acidic pH. As a result, cells may not be able to regulate their internal pH. Within these cells, this could cause a disruption of the function of biological catalysts known as
    - (1) enzymes
    - (2) toxins
    - (3) antibodies
    - (4) antigens
  
  8. Autotrophs might survive when heterotrophs cannot, because autotrophs are able to
    - (1) reproduce asexually
    - (2) become dormant
    - (3) exist without respiration
    - (4) make their own food
  
  9. During the process of cellular respiration, energy is released from
    - (1) carbon dioxide
    - (2) oxygen atoms
    - (3) water molecules
    - (4) chemical bonds
  
  10. Which type of pathogenic microbe causes AIDS?
    - (1) a bacterium
    - (2) a virus
    - (3) a multicellular fungus
    - (4) a single-celled algae

Name: \_\_\_\_\_

10 points

Date: \_\_\_\_\_

Homework # 3.7  
**Central Nervous System**

1. The 2 main divisions of the nervous system are:
2. The portion of the brain that controls balance is the \_\_\_\_\_.
3. The membranes that protect the brain are the \_\_\_\_\_.
4. The part of the brain that controls breathing is the \_\_\_\_\_.
5. Neurons that relay nerve impulses between the sensory and motor neurons are called \_\_\_\_\_.
6. A part of the cell that acts like the brain is the \_\_\_\_\_.
7. A nerve that contains both sensory and motor neurons is called a/an \_\_\_\_\_ nerve.
8. The part of the brain that controls the voluntary actions of muscles and bones is the \_\_\_\_\_.
9. The \_\_\_\_\_ controls the reflexes.
10. The \_\_\_\_\_ protects the spinal cord.