IMMUNITY WORKSHEET

Choose the one best answer for each of the 20 questions below. This assignment is due in one week, on March 24, and will not be accepted past this date.

1. Any foreign material that can get inside your body and make you sick is called a
   a. T cell
   b. pathogen
   c. phagocyte
   d. non-specific response

2. Which of the following is not an example of a surface barrier that prevents pathogens from entering the body:
   a. skin
   b. mucous
   c. tears
   d. inflammation

3. T cells are:
   a. made in bone marrow but mature in the thymus
   b. made in the thymus but mature in bone marrow
   c. made and mature in bone marrow
   d. made and mature in the thymus

4. Antibiotic resistance occurs quickly because:
   a. Evolution occurs rapidly because a new generation of bacteria can be generated every 20 minutes.
   b. Some people do not take the full course of antibiotics, promoting the growth of stronger bacteria.
   c. Bacteria can swap bits of DNA with each other, meaning that dangerous bacteria can acquire resistant DNA from other strains of bacteria.
   d. All of the above.

5. Which of the following offers long-term protection against a specific virus?
   a. antibiotics
   b. passive immunity vaccination
   c. active immunity vaccination
   d. none of the above
6. One type of immune system malfunction is called **autoimmunity**; this is when the immune system for some reason attacks your own body in the same way it would normally attack an antigen.
Which of the following is **not** an example of an autoimmune disorder:
   a. rheumatoid arthritis
   b. lupus
   c. multiple sclerosis
   d. AIDS

7. The development of vaccinations began when Edward Jenner noticed that _____.
   a. rats were always present when people contracted bubonic plague
   b. people who had earlier exposure cowpox did not develop smallpox
   c. people who drank water from a particular public water pump developed cholera
   d. bacteria removed from a sick animal would cause the same illness if injected into a healthy animal

8. An antigen is ___________________.
   a. any molecule that the body recognizes as foreign
   b. the DNA or RNA of an infective pathogen
   c. an alternate term for an MHC complex
   d. the collection of circulating proteins which kill or tag microbes

9. Nonspecific immunity includes ___________________.
   a. the skin and epithelial linings like those in the lung
   b. macrophages
   c. lymphocytes and neutrophils
   d. the liver and spleen

Not commonly considered to be helpful, _____ is a defensive response that ______.
   a. all of the choices
   b. sneezing, expels irritants from the nasal cavity
   c. mucous, traps microbes in a sticky fluid
   d. diarrhea, flushes microbes from the intestines
11. Memory cells play a vital immune role ____________.
   a. when you are first exposed to a pathogen
   b. when you are exposed to a disease for the second time
   c. in non-specific immunity
   d. in the primary immune response

12. Cytotoxic T cells protect the body by ____________.
   a. making antibodies that float free in the body fluids
   b. activating the complement system
   c. secreting toxic substances that destroy pathogens
   d. phagocytizing invaders

13. Your cells have a unique MHC (major histocompatibility complex). Directions for producing MHCs come from ________________.
   a. the thymus
   b. the bone marrow
   c. inherited DNA
   d. the helper T-cells

14. How is inflammation helpful?
   a. it inhibits bacterial growth
   b. it limits mobility and facilitates rest of an injured structure
   c. it improves the availability of nutrients to improve the repair process
   d. all of the choices

15. Over time, antigen receptor diversity within a population ________.
   a. decreases because less fit individuals die and their genes are removed from the gene pool
   b. increases because the elements that form the receptor genes spontaneously rearrange
   c. decreases because receptor patterns that are not used are selected against
   d. increases because each new generation is born of parents that survived childhood diseases
16. Which of the following develops after the primary immune response?
   a. complement proteins
   b. macrophages
   c. memory cells
   d. antigens

17. Activated complement brings about the death of a microbe when it _____.
   a. organizes into a membrane pore and causes lysis of the cell
   b. activates a chemotaxic response in certain phagocytic cells
   c. mediates interactions between immune cells
   d. all of the choices

18. There are many types of immune system cells. The cell that produces antibodies is the
   ____________.
   a. macrophage
   b. phagocyte
   c. T lymphocyte
   d. B lymphocyte

19. Which of the following provides long-term immunity?
   a. memory cells
   b. cytotoxic T cells
   c. antigens
   d. complement proteins

20. The enzymes present within the AIDS virus ________.
   a. dissolve the membrane of the target cell to facilitate entry
   b. build proteins that will assemble into new AIDS viruses
   c. build DNA from RNA, a process called reverse transcription
   d. break down sugars to produce ATP needed for viral replication