Biology: Immune System Practice Test

1. A virus is different from all other organisms in that it
   a. contains DNA
   b. requires a living cell to reproduce
   c. reproduces in a short time
   d. contains RNA

2. When a virus enters a human cell, it may
   a. reproduce
   b. copy the cell's DNA
   c. control photosynthesis
   d. control cellular respiration

3. Many scientists consider viruses nonliving. Evidence supporting this consideration includes the fact that viruses
   a. always function independently of living organisms
   b. have cells with many nuclei
   c. cannot be reproduced in a sterile medium
   d. lack basic organelles

4. Viruses are considered an exception to the cell theory because they normally reproduce
   a. sexually by forming seeds
   b. only in a host cell
   c. asexually by forming spores
   d. by binary fission

5. What does a bacterial colony on a culture plate represent?
   a. a population descended from one or two bacteria
   b. a migration of bacteria into a cluster
   c. a single bacterium
   d. a community of related species

6. Why are bacteria important?
   a. they play an important role in all food webs
   b. They are all parasites and pathogenic
   c. they have a simple structure and metabolism
   d. all of these

7. The body's primary defense against disease-causing organisms is the immune system T or F
8. The substance that triggers specific defenses of the body is an antibody. T or F
9. The key cells of the immune system are antibodies. T or F

10. Most white blood cells destroy:
    a. acids
    b. pathogens
    c. phagocytes
    d. red blood cells

11. Which is a part of the body's nonspecific immunity against foreign invaders?
    a. skin
    b. the mucous membranes
    c. saliva and tears
    d. all of these

12. Which is a characteristic of T-cells?
    a. they produce and display antibodies on their surface
    b. they are activated by antigens
    c. they mature in the bone marrow
    d. all of these

13. Immunity results from the:
    a. ability of B cells to produce antibodies
    b. ability of T cells to produce antigens
    c. conversion of prothrobin to thrombin
    d. release of histamines causing capillaries to become leaky

14. The nonspecific immune system
    a. depends on the bodies ability to create antibodies against specific pathogens
    b. is regulated by by B cells
    c. is regulated by T cells
    d. consists of an continuous first line of defense against foreign substances (including pathogens). It includes the functions of skin, saliva, and tears.

15. Pathogens:
    a. are the first line of defense produced by the body to protect itself against invaders
    b. consist of all the defense cells (B cells, T cells, etc) produced by the body for defense.
    c. consist of all the cells that are in the body that are mobile (red blood cells, macrophages)
    d. consist of foreign invaders such as bacteria and viruses.

16. What is a major difference between B cells and T cells?
    a. B cells destroy bacteria and T cells destroy viruses
    b. B cells and T cells are born in bone marrow, but T cells mature in the thymus
    c. B cells are destroyed in bone marrow, and T cells destroyed in the thymus

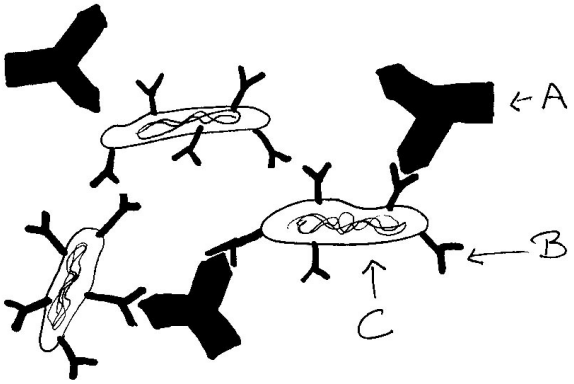
17. What are the large molecules on the surface of pathogens that act as the labels that allow the immune system to determine if a cell is foreign in the body?
    a. lymphocytes b. histamines c. antigens d. T-cells

18. Pathogens can be
    a. bacteria and viruses b. viruses and protists
    c. protists and fungi d. all of the these.

19. The job of a phagocyte is to
    a. prevent scab formation
    b. destroy pathogens by consuming them and triggering a defensive response in other immune system cells
    c. repair damaged immune system cells
    d. none of the these.

20. Typically people only get chicken pox once in their lives. Why do individuals not repeatedly fall victim to this illness?
    a. the nonspecific immune system has become more powerful
    b. memory B-cells produce antibodies more rapidly upon second exposure
    c. after the first infection by the virus, the body never comes in contact with the pathogen
    d. viruses are more likely to cause damage to young children than adults.

21. The cells that are responsible for producing antibodies are:
    a. B- lymphocytes b. T-Lymphocytes c. macrophages d. phagocytes
22. Many bacteria that enter the circulatory system are engulfed and destroyed by
    a. antibodies b. platelets
    c. phagocytes d. phagocytic red blood cells
23. The most effective attacking cells in the immune system are
    a. helper T-cells b. B cells c. killer T-cells d. mast cells
24. Physicians search for an organ donor whose proteins match the recipient's as closely as possible to prevent
    a. hemorrhages b. infection c. rejection d. allergies
24. Smallpox appears to have been eliminated as a disease by the use of
    a. vaccines b. antibiotics c. interferon d. parasites



26. What role does letter A play in the immune system response?
    a. A is a pathogen that attacks cells in our body.
    b. A is an antibody that attaches to antigens and clumps them together
    c. A is a phagocyte that engulfs and destroyes pathogens.
    d. None of the above.
27. What role does letter C play in the immune system?
    a. It is a pathogen, probably a bacteria, covered with antigens.
    b. It is an antibody producing B cell
    c. It is a phagocyte that engulfs foreign particles
    d. None of the above.
28. What role does letter B play in the immune respone?
    a. It is an antigen that marks it as a foreign invader to white blood cells.
    b. It is an antibody that has attached to a bacteria
    c. It is a virus ready to destroy a human cell.
    d. none of the above.

KEY

1. b
2. a
3. c
4. b
5. a
6. a
7. f: skin and non specific defenses are the first defense against pathogens
8. f: these are antigens, not antibodies
9. f: antibodies are not cells/ white blood cells are the main immune system cells
10. b
11. d
12. b
13. a
14. d
15. d
16. b
17. c
18. d
19. b
20. b
21. a
22. c
23. c
24. c
25. a
26. b
27. a
28. a