In your textbook, read about the innate immune system.

If the statement is true, write True. If it is not, rewrite the italicized part to make it true.

1. Healthy skin is a good defense against the invasion of pathogens because it is free of bacteria.
   False — a physical barrier that prevents entry of pathogens into body

2. In your trachea, saliva traps microbes and prevents them from entering your lungs.
   False — Mucus

3. Macrophages migrate into the bloodstream when the body is challenged by a pathogen.
   False — out of body tissue into infected areas

4. Phagocytes at the site of an infection or inflammation destroy pathogens by surrounding and engulfing them.
   True

5. The third method of defense against infection is the consumption of pathogens by neutrophils.
   False — Monocytes that mature to become macrophages

6. Interferon is produced by cells infected by pathogenic bacteria.
   False — Viruses

In your textbook, read about acquired immunity.

Circle the letter of the choice that best completes the statement.

7. The human lymphatic system is important in
   a. filtering pathogens from lymph.
   b. keeping body fluids constant.
   c. resistance to disease.
   d. all of the above.

8. Tissue fluid is found
   a. in lymph vessels.
   b. in the bloodstream.
   c. around body cells.
   d. in lymph ducts.

9. The main function of lymph nodes is to
   a. store red blood cells.
   b. filter lymph.
   c. filter excess fluid.
   d. trigger an immune response.

10. A reservoir for lymphocytes that can be transformed into specific disease-fighting cells is the
    a. thymus gland.
    b. thyroid gland.
    c. pituitary gland.
    d. pancreas.
In your textbook, read about antibody immunity and cellular immunity.

Complete each sentence.

11. **Acquired immunity** is the building up of a **resistance** to a specific pathogen.

12. Two types of immunity that involve different kinds of cells and cellular actions are **antibody** immunity and **cellular** immunity.

13. The presence of foreign **antigens** in the body triggers the production of **antibodies** by plasma cells.

14. A **B cell** is a lymphocyte that, when activated by a **T cell**, becomes a plasma cell and produces **antibodies**.

15. Cellular immunity involves several different types of **T** cells.

16. A **Killer T cell** releases enzymes directly into the **pathogen**.

Complete the table by checking the correct columns for each example.

<table>
<thead>
<tr>
<th>Example</th>
<th>Type of Immunity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Cellular</strong></td>
</tr>
<tr>
<td>17. Involves the protection of antibodies</td>
<td>✓</td>
</tr>
<tr>
<td>18. Simulated by antigens in the body</td>
<td>✓</td>
</tr>
<tr>
<td>19. Clones of killer T cells produced</td>
<td>✓</td>
</tr>
<tr>
<td>20. Memory cells produced so the body can respond quickly to a second attack</td>
<td>✓</td>
</tr>
<tr>
<td>21. Key role played by antigen-antibody complex</td>
<td>✓</td>
</tr>
<tr>
<td>22. T cells destroyed by pathogens directly</td>
<td>✓</td>
</tr>
</tbody>
</table>
In your textbook, read about passive and active immunity to infectious diseases.

Answer the following questions.

23. Distinguish between active and passive immunity.

Active immunity develops as a result of direct exposure to antigens; passive immunity results from acquiring antibodies through vaccinations, or via the placenta or breast milk.

24. In what two ways can passive immunity develop?

- Naturally, when antibodies are transferred from mother to fetus or nursing infant
- Artificially, via injection

25. What is a vaccine?

A substance made up of weakened or dead pathogens, or parts of pathogens that, injected into body, will cause active immunity.

In your textbook, read about AIDS and the immune system.

For each statement below, write true or false.

26. The virus that causes AIDS—Human Immunodeficiency Virus—is well-named because it attacks the immune system.

- True

27. HIV can be transmitted by air.

- False

28. A child born to a woman who is infected with HIV is at risk for being infected, too.

- True

29. HIV destroys a person's resistance to disease by attacking and destroying memory T cells.

- False

30. In a blood sample from an HIV-positive person, you would expect to find most of the viruses existing free in the blood, rather than being hidden inside cells.

- False

31. If a person is infected with HIV, he or she will usually develop AIDS within about a year.

- True

32. The cause of death for a person with AIDS usually is some type of infection that the body's weakened immune system can no longer fight off.

- False

33. The majority of untreated persons infected with HIV will develop AIDS.

- True