

Section 40–2 The Immune System (pages 1036–1042)



TEKS FOCUS: 10A Functions of the immune system

This section describes the body's defenses against disease-causing organisms and explains what immunity is.

Introduction (page 1036)

1. The body's main defense against pathogens is the _____.

Match the type of defense with its role in the body.

Defense	Role
_____ 2. Nonspecific	a. Destroying harmful pathogens that enter the body
_____ 3. Specific	b. Preventing pathogens from entering the body

Nonspecific Defenses (pages 1036–1038)

4. What is the job of the body's first line of defense? _____

5. List the four components of the body's first line of defense.

a. _____ c. _____
b. _____ d. _____

6. Is the following sentence true or false? The body's most important nonspecific defense is the skin. _____

7. How does mucus help protect the body from disease? _____

8. Body secretions contain an enzyme, called _____, that kills bacteria.

9. When does the body's second line of defense come into play? _____

10. Is the following sentence true or false? The inflammatory response is a nonspecific reaction to tissue damage caused by injury or infection. _____

11. White blood cells called _____ engulf and destroy bacteria.

12. Why does an increase in the number of white blood cells indicate that the body is dealing with a serious infection? _____

13. An elevated body temperature is called a(an) _____.

14. Circle the letter of each sentence that is true about elevated body temperature.
- a. It kills many pathogens.
 - b. It speeds up the action of white blood cells.
 - c. It decreases heart rate.
 - d. It slows down chemical reactions.
15. Is the following sentence true or false? Interferon is a protein that helps fight bacterial infections. _____

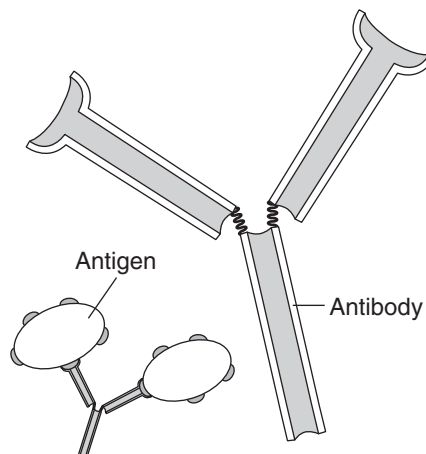
Specific Defenses (pages 1038–1041)

16. What is the immune response? _____

17. A substance that triggers the immune response is known as a(an) _____.
18. What are some examples of antigens? _____

19. List the two different immune responses.
a. _____ b. _____
20. Circle the letter of each sentence that is true about humoral immunity.
- a. It is a response to pathogens in body fluids.
 - b. It depends on lymphocytes.
 - c. It involves antibodies.
 - d. It involves plasma cells.
21. A protein that helps destroy pathogens is called a(an) _____.
22. Is the following sentence true or false? Antibodies can fight viruses but not bacteria.

23. Label the antigen-binding sites in the drawing below.



24. Is the following sentence true or false? Plasma cells are specialized B cells.

25. What happens once the body has been exposed to a pathogen? _____

26. Circle the letter of each sentence that is true about cell-mediated immunity.
- a. It is a defense against the body's own cells.
 - b. It involves killer T cells.
 - c. It involves antibodies.
 - d. It causes pathogen cells to rupture and die.
27. Is the following sentence true or false? Cell-mediated immunity is particularly important for diseases caused by prokaryotic pathogens. _____

Acquired Immunity (pages 1041–1042)

28. The first smallpox vaccine was produced by _____.
29. What is vaccination? _____

30. How do vaccines work? _____

31. Complete the Venn diagram by labeling the two types of immunity.

