

Name _____

Period _____

AP Biology

Date _____

RAVEN CHAPTER 48 GUIDED NOTES: THE IMMUNE SYSTEM

1. List and describe four components of the **first line of defense** used by the vertebrate body.

a. _____

b. _____

c. _____

d. _____

2. List and describe four components of the **second line of defense** used by the vertebrate body.

a. _____

b. _____

c. _____

d. _____

3. What is the role does the lymphatic system play in immunity?

4. Outline the significant steps that occur during an inflammatory response and explain how each aids in the fight against infection.

5. What is an antigen? _____

6. Which lymphocytes are involved in the humoral immune response? _____

7. Which lymphocytes are involved in the cell-mediated immune response? _____

8. Explain the difference between acquired (active) immunity and passive immunity.

9. Explain the basic mechanism of vaccines.

10. Identify several differences between the lymphocytes.

a. B Lymphocytes _____

b. T Lymphocytes _____

11. What are MHC proteins and what role do they play in the immune system?

12. From what types of attack do T cells protect the body?

13. What are some of the defensive actions of helper T cells?

14. What is the role of cytotoxic T cells and describe their mechanism of action?

15. How do B cells become activated?

16. When B cells are activated, what do they do?

17. What are antibodies (immunoglobulins)? Make brief notes about its structure.

18. Explain why the secondary response to a pathogen is quicker and more robust than primary response.

19. Explain how HIV can defeat the immune system.

20. HIV doesn't directly kill people. Then why is AIDS always a fatal disease?

21. What is antigen shifting and how is it an example of evolution by natural selection?

22. Explain autoimmune diseases.

23. What happens when you have an allergy?
