

Lymphatic System

Answer Key

## 1. Answer: C

**Explanation**: The **humoral immune response** is produced by **B cells** that defends primarily against bacteria and viruses present in body fluids. In this response, the B cells secrete free-floating antibodies into the blood and lymph (historically, blood and lymph were called body "humors", hence the name). The antibodies mark invaders by binding to them and the resulting antigen-antibody complexes are easily recognized for destruction and disposal by phagocytes.

# 2. Answer: A

**Explanation:** The lymphatic system is involved in both innate and adaptive immunity. It is made of a branching network of vessels, numerous **lymph nodes (i.e., round organs packed with macrophages and lymphocytes)**, the bone marrow, and several organs.

### 3. Answer: C

**Explanation:** Immunodeficiency disorders are underreactions of the immune system, resulting in a defective or absent immune response. **AIDS is an acquired immunodeficiency** and so is Hodgkin's disease, cancer that damages the lymphatic system and imperils our immune system.

### 4. Answer: A

**Explanation:** The ability of lymphocytes to recognize the body's own molecules enables our adaptive immune response to battle foreign invaders without harming our healthy cells. In addition to this, the immune system is able to distinguish the body's own cells from those of other people. This is due to many genes containing information that produce **major histocompatibility complex (MHC) molecules.** 

### 5. Answer: C



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**Explanation: If memory cells produced in the primary response are activated by a second exposure to the same antigen, it initiates the secondary immune response.** Memory cells formed in the primary response enable the rapid formation of many effector cells specific to the antigen. Because a large pool of memory cells is activated, it is faster and stronger than the primary response.



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