Immune System

Answer Key

1. **Answer**: C

Explanation: **Interferons** are a group of signaling proteins secreted by virus-infected cells alarming nearby uninfected cells to produce substances that inhibit viral replication. In this way, interferons limit the spread of viruses in the body.

2. **Answer:** D

Explanation: The neutrophils engulf the bacteria and the remains of any body cells killed by them or by the physical injury. Many neutrophils die in the process and their remains also get engulfed and digested. **This is visible to us as pus, which consists mainly of dead white blood cells**. It also contains fluid that has leaked from the capillaries and other tissue debris.

3. **Answer:** C

Explanation: Adaptive immunity is usually obtained by natural exposure to antigens, but it can also be achieved by **vaccination or immunization**. In this process, a vaccine composed of harmless variants or part of a disease-causing microbe (like inactivated bacterial toxin, dead or weakened virus, or a piece of a virus) is introduced to the immune system.

4. **Answer:** B

Explanation: During an injury, the bacteria activate macrophages, which produce signaling molecules that increase blood flow. At the injured site, mast cells (WBCs in connective tissues) release **histamine, which induces neighboring capillaries to dilate and become leaky.**

5. **Answer:** D

Explanation: A molecule that elicits an adaptive immune response is called an antigen.