

1. **Answer:** B.

**Explanation:** Plasma proteins, such as albumin, act as buffers that help maintain osmotic balance. **Fibrinogen is a plasma protein that functions in blood clotting**, and immunoglobulins are important in immunity. Apolipoproteins escort insoluble lipids, which can travel blood only when bound to proteins.

2. **Answer:** D.

**Explanation:** Leukemia is the cancer of white blood cells. Because cancer cells grow uncontrollably, **a person with leukemia has an unusually high number of WBCs, most of which are defective.**

Hemophilia is a condition leading to excessive and sometimes fatal bleeding that is attributed to either one or more proteins required for clotting being absent in individuals with the condition. Meanwhile, sickle cell anemia is an inherited red blood cell disorder in which there aren't enough healthy red blood cells to carry oxygen throughout your body. Lastly, atherosclerosis is a chronic cardiovascular disease wherein fatty deposits called plaques develop in the inner walls of arteries, narrowing passages through which blood can flow.

3. **Answer:** B.

**Explanation:** All blood vessels are lined by epithelium with the different sizes and structures of the blood vessel reflecting the roles they play in **transporting materials and exchanging them with tissues in the body.**

4. **Answer:** B.

**Explanation:** Stroke is the death of brain tissue due to lack of oxygen brought about by the rupture or blockage of arteries supplying blood to the brain.

5. Answer: B.

**Explanation:** The heart contracts and relaxes in a normal rhythmic sequence known as the cardiac cycle.

When the heart contracts, it pumps blood and when it relaxes, blood fills its chambers. In a phase called diastole, the heart relaxes and blood flows into all four chambers. Blood enters the right atrium from the vena cava (a large vein that carries blood to the heart from other areas of the body) and the **left atrium from the pulmonary veins** (which carry oxygenated blood from the lungs to the heart).

The contraction phase of the cycle is called systole. It begins with **a brief contraction of the atria that completely fill the ventricles with blood** (*atrial systole*). The ventricles then contract (*ventricular systole*) and the force closes the AV valves but opens the semilunar valves, where the blood is pumped into large arteries (**aorta**).