

Name \_\_\_\_\_

## The Marvelous Kidneys: Blood Filtration and Urine Production

### Short Answer Key

1. Glomeruli are clusters of tiny, porous blood vessels in the kidneys that allow high-pressure blood to enter and plasma to be filtered into nephrons. They initiate the blood filtration process by separating liquid plasma from blood cells and other components.
2. The composition of urine changes based on the body's internal balance. When there are more waste products and excess substances in the bloodstream, urine becomes more concentrated. Conversely, when the body is well-hydrated and waste levels are lower, urine becomes more dilute.
3. Essential substances reabsorbed by nephrons include water, glucose, and amino acids. Nephrons selectively reabsorb these substances back into the bloodstream to maintain the body's balance.
4. Urine is considered valuable because it can provide important information about a person's health. Changes in urine color, odor, or composition can indicate various medical conditions, including kidney diseases, diabetes, infections, and dehydration. It helps healthcare professionals diagnose and monitor these conditions.
5. Approximately 95% of urine is composed of water.

