

Name \_\_\_\_\_

## Kidney Power: The Role of Kidneys in the Excretory System

### Short Answer Key

1. Nephrons in the kidneys are tiny filtering units that filter blood, separating waste products and excess substances from essential substances like water, glucose, and amino acids.
2. The kidneys help regulate blood pressure by adjusting blood volume. When excess water is removed, it reduces blood volume, lowering blood pressure. This regulation is essential to prevent conditions like hypertension.
3. Filtration in the kidneys begins with blood entering the glomerulus, where blood pressure forces plasma out of blood vessels. This plasma is then processed and filtered as it travels through the nephron's tubules.
4. The kidneys play a significant role in maintaining the body's pH level by excreting excess hydrogen ions when the blood becomes too acidic, thus lowering acidity levels.
5. The kidneys regulate electrolytes in the body by excreting excess electrolytes like sodium and potassium through urine or reabsorbing them back into the bloodstream when needed.

