Enzyme Fundamental Concepts

1. Enzymes are biological catalysts.

2. Enzymes are globular proteins.

3. Enzymes speed up chemical reactions by lowering activation energy.

4. Enzymes catalyze exergonic (exothermic)/ spontaneous reactions.

5. Enzymes are unused and unchanged by the chemical reaction they catalyze.

6. Enzymes catalyze one specific chemical reaction.

7. An increase in the concentration of enzyme will result in an increase in the rate of reaction.

8. An increase in the amount of substrate will most significantly result in an increase of the amount of product produced.

9. An increase in temperature will result in an increase in the rate of reaction; unless the temperature is too high.
   - High temperatures will interfere with the interactions between the amino acids of the enzyme, causing it to unravel or denature.

10. Each enzyme has a specific pH range that works the best for the enzyme. A pH outside this optimum range can cause the enzyme to denature.
    - Different concentrations of OH^- and H^+ ions will interfere with the interactions between the amino acids of the enzyme, causing it to unravel or denature.