Metabolism and energy

1. The conversion of glucose to carbon dioxide and water is an example of:
   - an anabolic reaction
   - a condensation reaction
   - an esterification reaction
   - a catabolic reaction

2. Which of the following is not a feature of collision theory?
   - the rate of chemical reactions increases with increasing temperatures
   - the reaction is faster in dilute solute solutions than in concentrated
   - at high temperatures molecules have more energy than at low temperatures
   - the more molecules present, the faster the reaction

3. Catalysts:
   - slow down chemical reactions
   - provide an alternative reaction pathway
   - are used up in reactions
   - increase the activation energy

4. In an endergonic reaction:
   - energy is absorbed from the surroundings
   - bonds being formed are the same strength as bonds being broken
   - energy is released to the surroundings
   - bonds being formed are stronger than bonds being broken

5. In an exergonic reaction:
   - bonds being formed are the same strength as bonds being broken
   - energy is released to the surroundings
   - bonds being formed are stronger than bonds being broken
   - energy is absorbed from the surroundings

6. Examples of anabolic reactions include:
   - the breakdown of carbohydrates
   - hydrolysis reactions
   - the breakdown of lipids
   - the build up of proteins