

**Virtual Lab: Enzyme Controlled Reactions  
Worksheet**

1. Which of the following does NOT apply to an enzyme:
  - a. Catalyst
  - b. Inorganic
  - c. Protein
  - d. All of the above apply to an enzyme
  
2. When an enzyme catalyzes a reaction:
  - a. Substrate(s) bind in the active site
  - b. Products bind in the active site
  - c. The shape of the enzyme remains unchanged
  - d. The enzyme is consumed by the reaction
  
3. Which of the following would interfere most with the ability of an enzyme to catalyze a reaction?
  - a. Reduced concentration of substrate available
  - b. Reduced concentration of product available
  - c. Increased concentration of substrate available
  - d. A change in the pH
  
4. Feedback mechanisms regulate the rate of enzyme activity, effectively “turning off” an enzyme in a reversible way until more product is needed. Which of the following would be most effective as a feedback mechanism?
  - a. Reduced concentration of product
  - b. Increased concentration of substrate
  - c. A change in pH
  - d. Temporary binding of a non-substrate molecule in the active site
  
5. Which of the following statements is accurate in describing the activity of the lactase enzyme?
  - a. Lactase can function equally effectively at many different pH levels
  - b. The shape of lactase does not change during the reaction
  - c. Lactase is converted to glucose and galactose by the reaction
  - d. One lactase enzyme can catalyze many reactions