

Enzymes Concept Questions

1. Using examples, describe the two ways most enzymes are named.
2. State at least three characteristics of enzymes.
3. Discuss the importance of enzymes to the life of a cell.
4. How is it that most enzymes catalyze only one specific reaction?
5. How do enzymes speed up chemical reactions?
6. Explain why changing the pH and/or salt concentration of a solution containing an enzyme can affect the enzyme activity.
7. Explain how temperature can sometimes increase, sometimes decrease, and sometimes stop enzyme activity.
8. Why does changing the shape of an enzyme affect the rate at which it can catalyze reactions?
9. What is the purpose of a fever? Explain why a high fever is dangerous.
10. When Siamese cats are born, their coloration is very light over their entire body. After many months, fur on their ears, paws, tail and nose darkens (these parts of the body are cooler than the rest). From what you know about the effect of temperature on enzyme activity, propose a hypothesis that might account for this phenomenon.
11. The rate of an enzyme-catalyzed reaction increases with increasing substrate concentration, but only up to a point. Explain.