

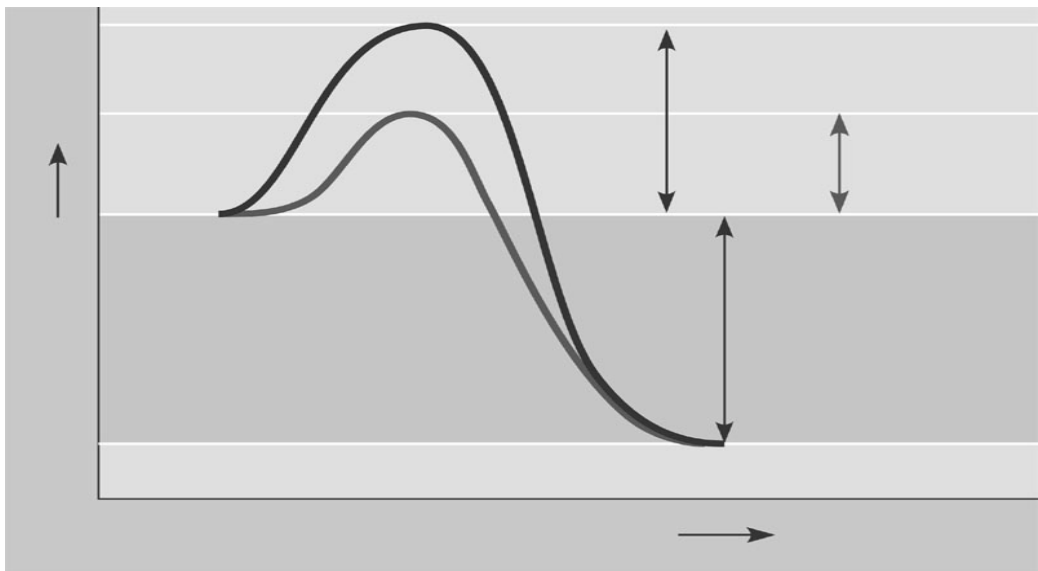
Name \_\_\_\_\_

Date \_\_\_\_\_

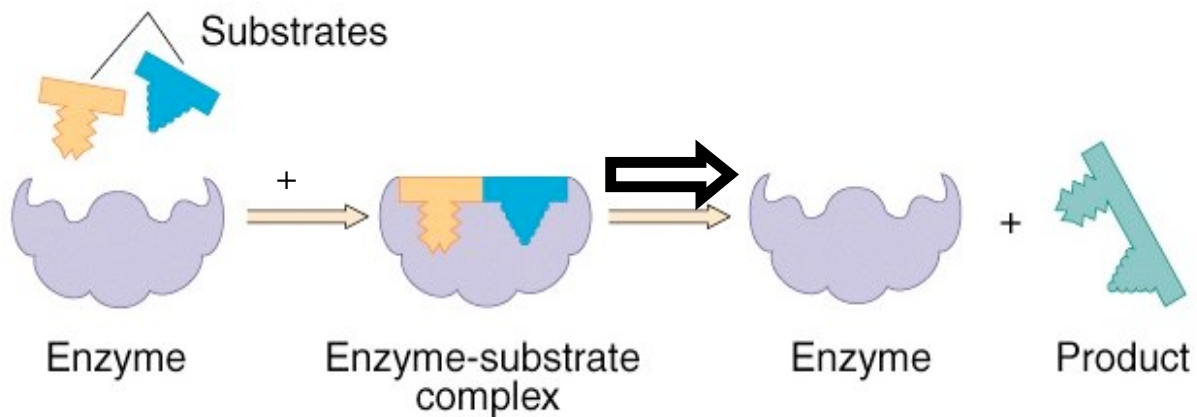
Student # \_\_\_\_\_

# ENZYME WORKSHEET

1. What are enzymes made of? (circle correct answer)    Lipids    Carbohydrates    Proteins    Nucleic acids
2. What do enzymes do? \_\_\_\_\_
3. **Label** the following picture: Activation energy, with an enzyme, without an enzyme, product and substrate, time, energy (you do not have to label all the arrows)



4. **Explain** what takes place in each step of the diagram:

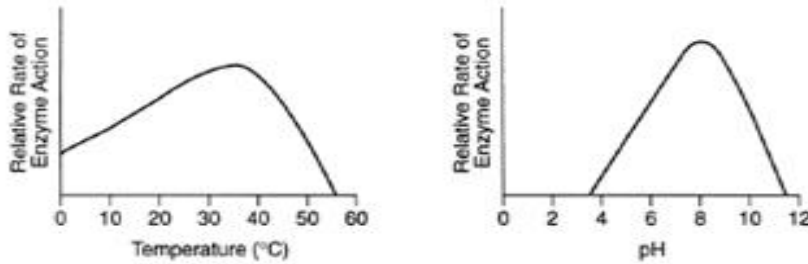


5. Draw and label an inhibitor affecting an enzyme reaction.

6. What 2 environmental conditions can affect the activity of an enzyme?

\_\_\_\_\_ & \_\_\_\_\_

**Use the 2 graphs below to answer Questions 10 & 11.**

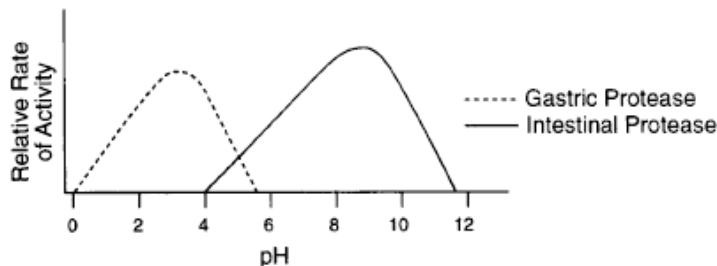


7. What is the optimal pH that this enzyme functions at? \_\_\_\_\_

8. What is the optimal temperature that this enzyme functions at? \_\_\_\_\_

9. What happens when the pH is 2? \_\_\_\_\_

**Use the below graph to answer Questions 10-12**



10. What is the optimal pH for Intestinal Protease? \_\_\_\_\_

11. What is the optimal pH for Gastric Protease? \_\_\_\_\_

12. Which enzyme works best in a very acidic environment? (Circle your answer)     Gastric Protease  
Intestinal Protease

True or False:

- 13. Enzymes are alive.
- 14. Enzymes are found in all living things.
- 15. Denatured enzymes do not work.
- 16. A small change in temperature will denature an enzyme.
- 17. All enzymes in the human body work at the same pH level.
- 18. In the induced fit model of an enzyme the active site will wrap around the substrate.
- 19. Enzymes are catalysts.
- 20. All proteins are enzymes.