

Name: _____

Date: _____

- [3 pt] 1. What is an enzyme active site? (Use your own words and complete sentences)
- [3 pt] 2. What does the term "stereospecific" mean. (Use complete sentences)
- [5 pt] 3. What is the "lock-and-key" hypothesis? Why is it a good model? Why is it a bad model? (Use complete sentences)
- [4 pt] 4. Why is the "induced-fit" model an improvement over the "lock-and-key" hypothesis? (Use complete sentences)
- [4 pt] 5. List 2 ways that a substrate binding to an active site helps the reactants be converted to products. Explain. (Use complete sentences)

CHE 102 - Homework - Ch 30b

[3 pt] 6. What is the "strain hypothesis"?

[4 pt] 7. Define "Feedback Inhibition" and "Feedforward Activation". (Use complete sentences)

[3 pt] 8. The amino acid glutamine is produced by a metabolic pathway in the liver. As the concentration of glutamine increases the metabolic pathway slows down. Is this control feedforward activation or feedback inhibition? Explain.

[6 pt] 9. Draw a graph illustrating the effect of temperature on the rate of enzyme-catalysed reactions. Explain why the enzyme-catalysed reaction rate decreases at (a) lower temperatures and (b) higher temperatures? Label the value on the x-axis that corresponds to the peak in your graph. (Use complete sentences)